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TRANSACTIONS

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TRANSACTIONS

OF THE

PHRENOLOGICAL SOCIETY,

INSTITUTED

22D FEBRUARY 1820.

WITH FIVE ENGRAVINGS.

JOHN ANDERSON JUN., EDINBURGH,
55. NORTH BRIDGE STREET,
AND SIMPKIN & MARSHALL, LONDON.

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Page 18. Note, line 2. *for* 2 vols. *read* 8 vols.
—— 89. date of paper by Dr Poole, *for* May 1. *read* April 17. 1823.
—— 131. *after* title, *supply* Read 26th December 1822.
—— 174. line 13. *for* tolerably *read* tolerable
—— 255. line 17, *after* communicated to *supply* the manifestations of
—— 286. line 11. *for* her *read* her's
—— 295. last line, *for* twelve *read* ten
—— 318. line 32. *for* physic *read* physics
—— 390. line 31, *for* all his *read* all the
—— 404. line 20. *after* any *supply* constant *and delete* whatever
—— 410. line 5. *for* great *read* grey

LIST OF MEMBERS

OF THE

PHRENOLOGICAL SOCIETY,

INSTITUTED

22d February 1820.

Ordinary Members.

Dates of Admission.	
1820,	
Feb. 22.	George Combe, Writer to the Signet.
	James Brownlee, Advocate.
	Andrew Combe, Surgeon.
	Rev. David Welsh, Minister of Crossmichael.
Mar. 7.	Alexander Fleming, Writer to the Signet.
April 4.	William Ritchie, Solicitor in Supreme Courts of Scotland.
17.	Rev. Alexander Stewart, Minister of Douglas.
June 30.	Robert Willis, M. D.
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	James Stewart, Engraver.

1820,

Nov. 28. James Law *junior*, 38. York Place.
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Captain Thomas Brown, F. R. S. E. & M. W. S.
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Lindsay Mackersy, Accountant.
Richard Poole, M. D.
Patrick Neill, F. R. S. E. and Sec. Wern. Nat. Hist. Soc. and Cal. Hort. Soc., &c.

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James Ashwell of Nottingham.
Alexander Buchanan, Writer, Glasgow.

26. Samuel Joseph, Sculptor.

1821,

Jan. 15. George Knight, English Academy, George Street.
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29. John Shank More, F. R. S. E. Advocate.
Francis Skelly, Edinburgh.
David Bridges *junior*, F. A. S. and Member of the Wern. Nat. Hist. Soc.
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William Brown, Surgeon.
John Calthrop Williams of Nottingham.

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Mar. 12. David Clyne, Solicitor Supreme Courts of Scotland.

26. Rev. Thomas Irvine, Assistant Minister of Lundie and Foulis.

1821,

Mar. 26. John Robertson Sibbald, Surgeon.
William Douglas, Miniature-Painter.

April 9. J. S. Pratt, Hanover Street.
John F. Macfarlan, Surgeon.

Nov. 22. William Davidson younger of Muirhouse.
Walter Tod, Nicolson Street.
John Anderson *junior*, Bookseller.
Thomas Elliotson of Jesus College, Cambridge.
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Dec. 6. Peter Couper, Writer to the Signet.
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1822,

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31. James Spittal *junior*, Merchant, Edinburgh.

Feb. 28. William Smith, Greek and Latin Academy, Brown's Square.

Apr. 11. Thomas Scott, Accountant.
25. Adam Gib Ellis, Writer to the Signet, M. W. S.

Nov. 28. William Scott, Writer to the Signet.

Dec. 12. Robert Ellis, Writer, Albany Street.
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1823,

Jan. 9. Charles James Fox Orr, Writer to the Signet.

April 3. Colonel Robert Wright, Royal Artillery.
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1820,

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1821,

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Charles Caldwell, M. D. Professor of the Institutes of Medicine, Teacher of Materia Medica, and Dean of the Faculty in the Medical Department of Transylvania University, Lexington, Kentucky, United States.
John Torbett, Surgeon, Paisley.

1822,

Nov. 22. John Findlay, Merchant, Paisley.
Andrew Alexander Royer, of the Administration Office, Jardin du Roi, Paris.
John Elliotson, M. D. Physician to St Thomas's Hospital, London.

1822,

Jan. 17. A. Menzies, Assistant Surgeon, half-pay, 21st Dragoons, India.

31. George Rennie, younger of Phantassie.

Feb. 28. John Butter, M. D. Plymouth, F. R. S. L., M. W. S.

Alexander Hood, Surgeon, Kilmarnock.

Apr. 25. Adam Hunter, M. D. Leeds, Member of Royal Medical Society, Edinburgh, Physician to the House of Recovery, Leeds, and Secretary to the Philosophical and Literary Society, there.

Nov. 28. Börge Anton Hoppe, M. D. Copenhagen.

1823,

Mar. 6. George Murray Paterson, M. D. Assistant Surgeon, Honourable East India Company's service, Bengal Establishment, Member of the Royal College of Surgeons, London, and of the Asiatic Society, Calcutta.

William Wagner, M. D. Professor of Medical Jurisprudence at Berlin.

Apr. 17. Thomas Buchanan, Licentiate of the University of Glasgow, and Surgeon to the Hull Dispensary for diseases of the Eye and Ear.

May 1. David Ross, Surgeon, Royal Navy.

Reverend John Grierson, Minister of Dunblane.

Captain John Ross, Royal Navy.

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The Society is indebted to Mr WILLIAM DOUGLAS for the Drawings of the Skull of King Robert Bruce, and of the Figures in Plate II. at the end of this volume; and to Mr JAMES STEWART for the Drawings in Plate III.

LIST

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DONATIONS

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Cast of the Head of Mr George Bidder, Mental Calculator, presented by Miss Patrickson of Edinburgh.

Cast of the Head of Maxwell, executed at Edinburgh, for Stouthrief,
A large collection of Casts, illustrative of Phrenology.
Collection of Portraits of eminent Painters,
Skull of Carnimbeigle, a New Holland Chief,
Illustrations of Phrenology, with Plates, by Sir G. S. Mackenzie, Bart.
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Ditto of Dr Spurzheim, } Royer, Paris.

Essays on Phrenology, by George Combe, Esq. } presented by Mr
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System of Education on Phrenological Principles, by Dr Spurzheim, presented by the Author.

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Mask of J. P. Curran, Esq. taken from nature, } presented by Dr Abell.
Cast of the Head of an African, }
Ditto, of a Deaf, Dumb and Blind Individual, }

Two Hindoo Skulls, } presented by Dr J. S.
A New Hollander's Skull, } Combe of Leith.

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Cast of the Skull of Booth, executed at York, for Murder, presented by Thomas Buchanan, Esq.

Outlines of Character, presented by Maughan, Esq. London.

Mask of Dean Swift, taken from nature, presented by Andrew Carmichael, Esq. Dublin.

(PRELIMINARY DISSERTATION.)

ON THE PROGRESS AND APPLICATION OF PHRENOLOGY.

By Mr George Combe.

Read to the Society, 14th November 1822.

Dr Gall, a Physician of Vienna, now resident in Paris, is the founder of this system. He is descended of a respectable family residing at Tiefenbrun, two leagues distant from Pforzheim in Swabia. He was born on 9th March 1757, and is the sixth child of the marriage *. His father was a merchant, and Mayor of the village. His parents, professing the Roman Catholic religion, had intended him for the Church; but his natural dispositions were opposed to it. His studies were pursued first at Baden, afterwards at Brucksal, and then were continued at Strasbourg. Having se-

* The facts of a private nature stated in this Dissertation, are derived from letters of Dr Spurzheim to the Society, or to the author of this article.

lected the healing art for his profession, he went, in 1781, to Vienna, the medical school of which had obtained great reputation, particularly since the times of VAN SWIETEN and STOLL. Dr GALL gives an account, of which the following is an abstract, of the manner in which he was led to the study of the natural talents and dispositions of men, his views of which terminated in the formation of the Phrenological System.

From an early age he was given to observation, and was struck with the fact, that each of his brothers and sisters, companions in play, and schoolfellows, possessed some peculiarity of talent or disposition, which distinguished him from others. Some of his schoolmates were distinguished by the beauty of their penmanship, some by their success in arithmetic, and others by their talent for acquiring a knowledge of natural history, or of languages. The compositions of one were remarkable for elegance, while the style of another was stiff and dry; and a third connected his reasonings in the closest manner, and clothed his argument in the most forcible language. Their dispositions were equally different, and this diversity appeared also to determine the direction of their partialities and aversions. Not a few of them manifested a capacity for employments which they were not taught; they cut figures in wood, or delineated them on paper; some devoted their leisure to painting, or the culture of a garden, while their comrades abandoned

themselves to noisy games, or traversed the woods to gather flowers, seek for birds-nests, or catch butterflies. In this manner, each individual presented a character peculiar to himself, and GALL never observed, that the individual, who in one year had displayed selfish or knavish dispositions, became in the next a good and faithful friend.

The scholars with whom young GALL had the greatest difficulty in competing, were those who learned by heart with great facility; and such individuals frequently gained from him by their repetitions the places which he had obtained by the merit of his original compositions.

Some years afterwards, having changed his place of residence, he still met individuals endowed with an equally great talent of learning to repeat. He then observed, that his schoolfellows, so gifted, possessed prominent eyes; and he recollected, that his rivals in the first school had been distinguished by the same peculiarity. When he entered to the University he directed his attention, from the first, to the students whose eyes were of this description, and he soon found, that they all excelled in getting rapidly by heart, and giving correct recitations, although many of them were by no means distinguished in point of general talent. This observation was recognized also by the other students in the classes, and although the connection betwixt the talent and the external sign was not at this time established upon such complete evidence as is requisite for a

philosophical conclusion, yet Dr GALL could not believe that the coincidence of the two circumstances thus observed was entirely accidental. He suspected, therefore, from this period, that they stood in an important relation to each other. After much reflection, he conceived, that if Memory for words was indicated by an external sign, the same might be the case with the other intellectual powers; and from that moment, all individuals distinguished by any remarkable faculty became the objects of his attention. By degrees, he conceived himself to have found external characteristics, which indicated a decided disposition for Painting, Music, and the Mechanical Arts. He became acquainted also with some individuals remarkable for the determination of their character, and he observed, a particular part of their heads to be very largely developed. This fact first suggested to him the idea of looking to the head for signs of the Moral Sentiments. But in making these observations, he never conceived for a moment, that the *skull* was the cause of the different talents, as has been erroneously represented;—he referred the influence, whatever it was, to the Brain.

In following out by observations, the principle which accident had thus suggested, he for some time encountered difficulties of the greatest magnitude. Hitherto he had been altogether ignorant of the opinions of Physiologists touching the brain, and of Metaphysicians respecting the mental

faculties, and had simply observed nature. When, however, he began to enlarge his knowledge of books, he found the most extraordinary conflict of opinions every where prevailing, and this, for the moment, made him hesitate about the correctness of his own observations. He found that the moral sentiments had, by an almost general consent, been consigned to the thoracic and abdominal viscera; and that while PYTHAGORAS, PLATO, GALEN, HALLER, and some other Physiologists, placed the sentient soul or intellectual faculties in the brain, ARISTOTLE placed it in the heart, VAN HELMONT in the stomach, DES CARTES and his followers in the pineal gland, and DRELINCOURT and others in the cerebellum.

He observed also, that a great number of Philosophers and Physiologists asserted, that all men are born with equal mental faculties; and that the differences observable among them are owing either to education, or to the accidental circumstances in which they are placed. If all differences are accidental, he inferred that there could be no natural signs of predominating faculties, and consequently, that the project of learning by observation, to distinguish the functions of the different portions of the brain, must be hopeless. This difficulty he combated, by the reflection, that his brothers, sisters, and schoolfellows had all received very nearly the same education, but that he had still observed each of them unfolding a distinct character, over which cir-

cumstances appeared to exert only a limited controul. He observed also, that not unfrequently they, whose education had been conducted with the greatest care, and on whom the labours of teachers had been most freely lavished, remained far behind their companions in attainments. "Often," says Dr GALL, "we were accused of want of will, or deficiency in zeal; but many of us could not, even "with the most ardent desire, followed out by the "most obstinate efforts, attain in some pursuits "even to mediocrity; while in some other points, "some of us surpassed our schoolfellows without an "effort, and almost, it might be said, without perceiving it ourselves. But, in point of fact, our "masters did not appear to attach much faith to "the system which taught the equality of mental "faculties; for they thought themselves entitled to "exact more from one scholar, and less from "another. They spoke frequently of natural gifts, "or of the gifts of God, and consoled their pupils "in the words of the gospel, by assuring them that "each would be required to render an account, "only in proportion to the gifts which he had received *."

Being convinced by these facts, that there is a natural and constitutional diversity of talents and dispositions, he encountered in books still another obstacle to his success in determining the external

* Preface by Dr GALL to the "Anatomie &c. du Cerveau," from which other facts in this Dissertation are taken.

signs of the mental powers. He found, that, instead of faculties for languages, drawing, distinguishing places, music, and mechanical arts, corresponding to the different talents which he had observed in his schoolfellows, the metaphysicians spoke only of general powers, such as perception, conception, memory, imagination, and judgment; and when he endeavoured to discover external signs in the head, corresponding to these general faculties, or to determine the correctness of the physiological doctrines regarding the seat of the mind, as taught by the authors already mentioned, he found perplexities without end, and difficulties insurmountable.

Dr GALL, therefore, abandoning every theory and preconceived opinion, gave himself up entirely to the observation of nature. Being Physician to a Lunatic Asylum in Vienna, he had opportunities, of which he availed himself, of making observations on the insane. He visited prisons, and resorted to schools; he was introduced to the courts of Princes, to colleges, and the seats of Justice; and wherever he heard of an individual distinguished in any particular way, either by remarkable endowment or deficiency, he observed and studied the development of his head. In this manner, by an almost imperceptible induction, he conceived himself warranted in believing, that particular mental powers are indicated by particular configurations of the head.

Hitherto, he had resorted only to Physiognomical indications, as a means of discovering the functions of the brain. On reflection, however, he was convinced that Physiology is imperfect when separated from Anatomy. Having observed a woman of fifty-four years of age, who had been afflicted with hydrocephalus from her youth, and who, with a body a little shrunk, possessed a mind as active and intelligent as that of other individuals of her class, Dr GALL declared his conviction, that the structure of the brain must be different from what was generally conceived,—a remark which TULPIUS also had made, on observing a hydrocephalic patient, who manifested the mental faculties. He, therefore, felt the necessity of making anatomical researches into the structure of the brain.

In every instance, when an individual whose head he had observed while alive happened to die, he used every means to be permitted to examine the brain, and frequently did so; and he found as a general fact, that on removal of the skull, the brain, covered by the dura mater, presented a form corresponding to that which the skull had exhibited in life.

The successive steps by which Dr GALL proceeded in his discoveries, are particularly deserving of attention. He did not, as many have imagined, first dissect the brain, and pretend by that means to have discovered the seats of the mental powers;

neither did he, as others have conceived, first map out the skull into various compartments, and assign a faculty to each, according as his imagination led him to conceive the place appropriate to the power. On the contrary, he first observed a concomitance betwixt particular talents and dispositions, and particular forms of the head; he next ascertained, by removal of the skull, that the figure and size of the brain are indicated by these external forms; and it was only after these facts were determined, that the brain was minutely dissected, and light thrown upon its structure.

Dr GALL was first known as an author by the publication of two chapters of an extensive work, entitled, "Philosophisch-medicinische Untersuch-" ungen über Natur und Kunst im gesunden und " kranken Zustande des Menschen, Wien, 1791." The continuation of this work has never appeared; but in the first of the two chapters printed, he has evinced the spirit with which his researches into the moral and intellectual nature of man were subsequently conducted. The first written notice of his inquiries concerning the head appeared in a familiar letter to Baron RETZEN, which was inserted in the German periodical journal "Deut-" schen Mercur," in December 1798. In this letter he announces the publication of a work upon his views concerning the brain; but circumstances induced him to alter his intention.

In 1796 Dr GALL commenced giving courses of private lectures at Vienna. Several of his hearers, as well as others who had never heard him lecture, published notices of his doctrines; and have represented them with greater or less exactness. Among the better class the following deserve to be noticed:

FRORIEP.—Who has printed an Exposition of the Doctrine of Dr GALL.—*3d Edition*, 1802.

MARTENS.—"Quelque chose sur la Physiognomie."—*Leipzic*, 1802.

WALTHER.—"Exposition critique de la Doctrine de GALL, avec quelques particularités concernant son auteur."—*Zurich*, 1802.

Having continued his lectures for five years, on 9th January 1802 the Austrian Government issued an order that they should cease; his doctrines being considered dangerous to religion. A General Regulation was made upon the occasion, prohibiting all private lectures, unless a special permission was obtained from the Public Authorities. Dr GALL understood the object of this "General Regulation," and never solicited permission, but rather stopt his courses. The doctrines, however, continued to be studied with greater zeal than before;—the prohibition strongly stimulated curiosity, and all publications on the subject continued to be permitted, provided they abstained from reflecting on the Government for issuing the "general order."

In 1800 Dr SPURZHEIM commenced his labours along with Dr GALL, and in that year assisted, for the first time, at one of his courses of lectures. Phrenology owes so many valuable additions and discoveries to the talents and exertions of this gentleman, and in Britain we are so exclusively indebted to his works and his personal exertions, for a knowledge of the science, that the introduction of a few particulars concerning him cannot fail to be interesting and appropriate.

Dr SPURZHEIM was born on 31st December 1776, at Longuich, a village near Trêves, on the Moselle. His parents cultivated a farm of the rich Abbey of *St Maximin de Trêves;* and he received his college-education at the University of that city. He was destined by his parents to become a Clergyman, but in 1799, when the French invaded that part of Germany, he went to Vienna to study Medicine, where he became acquainted with Dr GALL. He entered with great zeal into the consideration of the new doctrine; and, to use his own words, "he was "simply a hearer of Dr GALL till 1804, at which "period he was associated with him in his labours, "and his character of hearer ceased *."

Having completed his medical studies, he and Dr GALL quitted Vienna in 1805, to travel together, and to pursue in common their researches into

* Essai Philosophique sur la Nature morale et intellectuelle de l'Homme, par G. SPURZHEIM, M. D. Appendix p. 213.

the anatomy and physiology of the whole nervous system. In the period which elapsed betwixt the interdiction of Dr GALL's lectures in 1802, and the time when he and Dr SPURZHEIM left Vienna, the doctrine had made a rapid progress, not only in general diffusion, but in solid and important additions; a fact of which any one may be satisfied, by comparing the publications by Dr GALL's auditors already mentioned, with those by his hearers in the different towns in Germany, visited in the course of his and Dr SPURZHEIM's travels. The following works, in particular, afford evidence of the state of the science in 1805 :

BISCHOFF.—Exposition de la Doctrine de GALL sur le Cerveau et le Crâne, suivie de remarques de Mr HUFELAND sur cette doctrine.—*Berlin, 2de Edit.* 1805.

BLŒDE.—Le Doctrine du GALL sur les fonctions de Cerveau.—*Dresde, 2de Edit.* 1805.

From 1804 to 1813, Dr GALL and Dr SPURZHEIM were constantly together, and their researches were conducted in common. They left Vienna on 6th March 1805, to go direct to Berlin, and thereafter visited a variety of places, remaining at each the time noted below *.

* 1805 Berlin, from 18th March to the end of April.
Potsdam, during the first half of May.

From November 1807, to the present time, Dr GALL has never left Paris. In June 1813, Dr

---

1805.	Leipzic, from	23d May till	13th June.
	Dresden,	14th June	3d July.
	Halle,	8th July	28th July.
	Jena,	1st August	7th August.
	Weimar,	7th August	18th August.
	Goettingen,	21st August	31st August.
	Brauerschweig,	5th September	13th Sept.
	Copenhagen,	24th September	6th Nov.
	Kiel,	13th November	1st Dec.
	Hamburgh,	4th December	1st Feb. 1806.
1806.	Bremen,	3d February	18th February
	Münster,	21st February	19th March.
	Amsterdam,	25th March	25th April.
	Leyden,	25th April	4th May.
	Dusseldorf,	9th May	21st May.
	Frankfort,	27th May	6th June.
	Würtzbourg,	23d July	12th August.
	Marbourg,	14th August	25th August.
	Stuttgard,	8th October	19th October.
	Carlsruhe,	28th November	26th Dec.
	Lastall,	26th December	1st Jan. 1807.
1807.	Freybourg en Brisgaw,	2d January	16th January.
	Doneschingue,	16th January	23d January.
	Heidelberg,	28th January	13th February.
	Manheim,	19th February	6th March.
	Munich,	27th March	31st May.
	Augsbourg,	31st May	25th June.
	Ulm,	28th June	11th July.
	Zurich,	15th July	2d August.
	Bern,	8th August	5th September.
	Bâle,	7th September	24th Sept.

SPURZHEIM paid a visit to Vienna; from which he proceeded to Britain, and arrived there in March 1814. During his stay he published, in English, "The Physiognomical System of Drs GALL and "SPURZHEIM," in 8vo.; an "Outline of the "System," in 12mo.; and a work shewing the application of Phrenology to the subject of Insanity. He also delivered lectures in London, Bath, Bristol, Dublin, Cork, Liverpool, and Edinburgh. He returned to London in 1817; delivered again a course of lectures; became a Licentiate of the Royal College of Physicians in that city; and, in the month of July, of the same year, returned to Paris, in which capital he has since remained; and there, says he, "je me propose de "passer le reste de ma vie, occupé de la connais- "sance de l'homme dans l'état de santé et de ma- "ladie *."

Dr SPURZHEIM has contributed largely to the advancement of Phrenology, by enriching it with important discoveries, by introducing into it philosophical arrangement, and by pointing out its application to many interesting purposes connected with the human mind †.

1807. Muhlhause, 24th September 2d October.
Paris, November

* Letter from Dr SPURZHEIM to the Rev. David WELSH, Secretary to the Society, dated Paris, 2d February 1821.

† Since his return to Paris, Dr SPURZHEIM has published in this country, and in English, a work on the "Elementary Prin- "ciples of Education," founded on Phrenology.

" In the whole of our travels," says he, " we have " been well received, and the second course was al- " ways more fully attended than the first, so that " there was no doubt that the subject excited great " interest. But it is to be regretted that we stopt too " short a time to form practical pupils. The princi- " ples were explained, the development shewn, and " we were off. You will conceive that this was not " the way to establish the doctrine. We had more " advantage than our pupils, because we had great " opportunities of observing the heads of many men " of talents: we got more conviction than our " auditors. We were prepared by previous study " to make observations, but our stay was too short " to teach the auditors to repeat them. Dr GALL " even gave the advice not to repeat the experi- " ments, since it is difficult to do so, which I have " mentioned in my large English work, 2d edition " p. 270. But I assure you, that not *one Phreno- " logist, from knowledge*, has fallen back, saying " that the doctrine is false. I have seen frequently " the contrary, *i. e.* the belief in it strengthened by " self observations."

During Dr SPURZHEIM'S absence from Paris, Dr GALL did not lecture: after his return Dr GALL delivered one private course in his own house, and two public courses gratis, one, " à l'Ecole de Medecine," and the other in a hall " de l'Institution pour les Aveugles." Dr SPURZHEIM himself has delivered two courses each year since he settled in Paris,

" sur l'Anatomie, la Physiologie, et la Pathologie " du Cerveau, et des Sens exterieurs;" each course lasting three months; and he intends to continue his lectures in succeeding years. " Phrenology," says he, " had been in a great measure forgotten during " several years, but it gains strength of new. The " ridicule which pursued it in France is overcome, " and it now bears the reputation of a science. " My auditors have encreased in numbers each suc- " ceeding course; and as a greater part of them are " strangers from different regions, they will not " fail to spread the doctrines in their native coun- " tries. The zeal and assiduity with which they " have followed my instructions, authorise me to " entertain this expectation."

The following account of the state of Phrenology in Paris in June 1821, was communicated by a Member of the Society, in a private letter, to the Editor of the New Edinburgh Review, and appeared in that Journal in October of that year: " I " have heard," says the writer, " a belief in Phre- " nology avowed by some of the most eminent Pro- " fessors, both of the Colleges and of the Garden " of Plants. BLAINVILLE mentioned in a lecture " which I heard, that the principles were too well es- " tablished to admit of doubt, and that he himself " had made many observations, and never found an " exception. He said that he regarded the greater " number of the organs as established, and that he " believed farther observations alone were wanting

" to enable him to admit others. He started some
" objections regarding the lower animals, the une-
" qual thickness of whose skulls, he said, rendered
" it difficult to determine whether the external ele-
" vations perceptible in their heads were caused by
" brain or bone. In man, he said, no such objec-
" tion exists, except in old age, or cases of disease.
" GEOFFROY ST HILAIRE also, in his lectures at
" the Museum of Natural History, avows his be-
" lief in the doctrines, and points out in the lower
" animals many correspondences. Monsieur ROY-
" ER, too, of the Garden of Plants, is well known
" as a most decided convert; and, indeed, he ap-
" plied to me to procure for him the form of an ap-
" plication to be admitted a corresponding Mem-
" ber of the Phrenological Society of Edinburgh,
" which I obtained and gave him. It is worth
" mentioning, also, that, about two years ago, Dr
" GALL, at the request of the Minister of the In-
" terior, commenced lecturing for the benefit of the
" Medical Students in Paris. The lectures were,
" like others, delivered gratis; but he was provided
" with the use of the operation and lecture room
" in the *Hospice de Perfectionnement*, for his first
" course, and afterwards, on account of that being
" too small, with the large examination room of
" the Institution des Jeunes Aveugles, which is
" well fitted for the purpose. His audience amount-
" ed to betwixt 200 and 300; and so eagerly is he
" attended, that it is well known that many more

" tickets were applied for at each course than could " be given, and that the apartment was regularly " crowded half an hour before the lecture began. " Dr SPURZHEIM also continues to lecture in " Paris, and although, from his demanding a fee, " his auditory is not numerous compared with Dr " GALL's, yet he is regularly attended, and his " course is esteemed the more philosophic of the " two. I beg to add, that the physiognomical ex- " pression of some of the English students who " were present at BLAINVILLE's lecture, and who " probably knew nothing of Phrenology but " through the English Reviews, was truly ludi- " crous. They appeared to relax their features for " a laugh when the name of Dr GALL first escaped " the lips of the Professor; but when they heard " him spoken of with respect, and his doctrines de- " clared to be true, the expression changed into " wonder in some, and in others to absolute con- " tempt. I thought of the self-esteem for which " their nation is so remarkable, and could not re- " frain from smiling in my own turn, at this amusing " manifestation of the organ."

The statements of this letter are confirmed by a notice which appeared in the New Monthly Magazine for January 1823 *.

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* " Histoire des Fonctions du Cerveau. Par le Docteur GALL. 2 vols. 8vo. Paris 1822.

" This is another exposition of Dr GALL's system of *Invinci-*

The notion has been industriously propagated, that the system of Phrenology is merely an emanation from the fancies of the founders; but it is impossible to attend to the successive steps by which the science has been reared, and not be convinced of the erroneous nature of this assertion. In the beginning of his inquiries Dr GALL did not, and could not, foresee the result to which they would lead, or the relation which each successive fact, as

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ble (innate) *Dispositions*. This Gentleman, who possesses no little talent, both as a physician and a writer, has been practising, for the last twelve or fifteen years in Paris, where he has established a reputation, and realized a handsome fortune. On the first development of his system, it was received either with unthinking pleasantry, or dismissed as idle, without due consideration; but a more intimate knowledge of the man has led, if not to the adoption of his ideas, at least to a more serious and respectful examination of them. There are many men here (Paris) amongst the most eminent for their medical and physiological knowledge, who, though differing widely upon other scientific topics, yet agree in saying, that there is much, not only of probability, but of truth, in the system of Dr GALL. It is certain, that one of the most powerful motives of human action, *instinct*, has been but very imperfectly examined by the most celebrated modern philosophers, and, amongst others, the acute HELVETIUS. It appears to be the general opinion of the present *savans* of Paris, that Dr GALL's system calls for a much more serious and profound examination than it has hitherto undergone. To this task it will be necessary to bring a considerable share of anatomical science, as the Doctor, it is said, has made some very important discoveries in the structure of the brain. This new edition, which is improved and enlarged, will consist of 8 volumes 8vo."

it was discovered, would bear to the whole truths which time and experience might bring into view. He perceived, for instance, that the intensity of the desire for property bore a relation to the size of one part of the brain; and he announced this fact, and called the part the Organ of Theft, because he found it largest in thieves. When he had discovered that the propensity to destroy corresponded to the size of another part of the brain, he stated this fact also as an isolated truth, and named the part the Organ of Murder *, because he had found it largest in criminals condemned for that crime. In a similar way, when he had discovered the connection between the sentiment of benevolence and another portion of the cerebral mass, he called the part the Organ of Benevolence; and so on in regard to the other faculties and organs.

When we reflect on this mode of enquiring into the functions of the brain, we find it to be in the strictest degree philosophical, and to be free from certain insuperable objections which have opposed the success of all investigations conducted by the methods previously in use. From an early period Anatomists have *dissected* the brain, with the view of discovering its functions, but by this method they *could not* attain the object in view; because the

* The reader will find some observations on this subject in an Essay on Combativeness, Destructiveness, and Secretiveness, in a subsequent part of this Volume.

structure of the different parts of the body does not, of itself, indicate their functions. By examining the liver, independent of experience, no person could predicate that its function is to secrete bile; nor by dissecting the lungs, could any one discover that their office is to give out carbon from the blood. The mesenteric glands have been dissected by many thousand anatomists, and up to this hour no certainty in regard to their use is attained. Every effort, therefore, to discover the functions of the brain by mere dissection, has necessarily proved abortive; and physiologists, in general, still represent the uses of its different parts, as a mystery in science. Metaphysical inquirers, on the other hand, have resorted chiefly to reflection on consciousness, as a means of cultivating the philosophy of mind; but as consciousness does not reveal the existence of the organs, by which the mind communicates with the external world, they were incapable, by this method, of throwing light upon the connection betwixt the mind and the body *. There is no doubt that, by attending to their own consciousness, metaphysi-

* In assuming that the Mind is not conscious of the existence of the organs, I differ from some Members of the Society, for whose judgment I have the highest respect; and, therefore, subjoin the following explanation. Consciousness is held by some persons to be coextensive with thought and feeling, and it is said that we are conscious of all we know; but in the text I speak of it as an independent source of original information. If an individual is seized with a pain in the thigh,

cians have ascertained and described the relations of their own thoughts and feelings, and that occa-

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it is the proper office of consciousness to make him acquainted with the existence of the pain, and to indicate the direction whence it procceds, but not to inform him whether it originates in muscle, nerve, or bone. Suppose his thigh to be opened by a surgeon, and that he has fortitude and philosophy sufficient to attend to the tying of a ligature round the popliteal artery, he may, in this manner, become acquainted with the existence of this bloodvessel; and learn, also, the seat of the disease, and origin of the pain. On the principle that consciousness is coextensive with knowledge, he might be said to be now conscious of the existence of this part, and also of the pain being situate in it, but it is obvious that he has acquired this knowledge through the medium of the understanding, and not directly and intuitively by means of consciousness. Now, the proposition of the text is this, that consciousness does not directly and intuitively communicate to us a knowledge of the mental organs, so as to enable us, by merely reflecting on what passes within ourselves, to predicate their connection with the mind. While in health, they produce no sensation (distinct from thought) indicative of their own operation, and when diseased they produce only the feeling of pain; and pain in the ear, for example, no more leads us to infer (prior to knowledge acquired by the understanding), that an auditory nerve exists, than uneasiness in the thigh enables us (previous to a knowledge of anatomy), to infer the existence of an artery. If the principle that consciousness is coextensive with knowledge, were correctly applied, when used in this extensive sense, a person might be said to have no consciousness of the structure of his own body, before entering an anatomical theatre; but on his exit, after having heard a few able demonstrations, to be conscious of every nerve, muscle, bone, artery, and vein in his system. This would be clearly an abuse of language.

sionally these may be found to correspond with the thoughts and feelings of others; but their systems do not exhibit complete and practical views of human nature; and, without at all wishing to undervalue their labours, I must regret that they should despise the advantages which they might derive from phrenological observations.

The method of enquiry pursued by Dr GALL, having for its object the discovery of the relation betwixt the mental powers and their organs, possessed advantages peculiar to itself, and was free from the objections to which the methods of the physiologists and metaphysicians were liable. He attended to facts presented to his senses and understanding, and was thus led to a knowledge of a relation existing in nature, betwixt particular portions of the brain and particular faculties of the mind. However short, therefore, of complete success his enquiries may appear to some at present to be, it is indisputable that he and his followers are in the road which leads to truth. His mode of philosophising has nothing in common with the formation of an hypothesis; and so far from a disposition to invent a theory being conspicuous, there appears, in

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He would know that these parts exist in other men, and his understanding would infer that they exist also in himself; but he would have as little direct and intuitive evidence of their presence in himself, from pure consciousness, after the demonstration, as he had before it.

the disjointed items of information which he at first presented to the public, a want of even an ordinary regard for systematic arrangement. His only object seems to have been, to furnish a candid and uncoloured statement of the facts in nature which he observed; leaving their value to be ascertained by time and farther investigation. The slightest attention to the publications by Dr GALL'S auditors, before mentioned, will prove beyond a doubt that this was really the manner in which he made all his discoveries. A Member of the Society possesses a small work, entitled, " Dr J. F. GALL'S System " of the Functions of the Brain, extracted from " CHARLES AUGUSTUS BLŒDE'S account of Dr " GALL'S Lectures, held on the above subject at " Dresden; translated from the German." BLŒDE'S work, as already mentioned, was published in 1805; and in this translation the following list of Organs is given.

1. The impulse to Propagation.
2. Tenderness for Offspring.
3. Memoria realis, (Individuality).
4. Locality.
5. The Organ of the recollection of persons, (Form).
6. The disposition of Colouring.
7. Sounds.
8. Arithmetic.
9. Words.
10. Languages.
11. Mechanic skill.
12. Friendly attachment and Fidelity.
13. Valour.
14. Murdering.
15. Cunning.

16. The organ of Larceny.
17. Height, (Self-esteem).
18. Ambition and Vanity.
19. Circumspection.
20. Comparative Perspicuity, (Comparison).
21. Metaphysical Perspicuity (Causality).
22. Wit.
23. Inference.
24. Good Nature, (Benevolence).
25. Theosophy, (Veneration).
26. Perseverance, (Firmness).
27. Mimickry, (Imitation).

In the Monthly Magazine, also, for 1806, a plate and a list of the Organs, will be found exhibiting the discoveries then made, in which, as in the preceding instance, there is no philosophical principle of classification, no attempt at analysis of the powers, but a mere description of development and accompanying manifestations; and there were, as there still are, blanks in the views of the cranium, as well as faculties wanting in the list.

But what followed? As soon as observation had brought to light the great body of the facts, and the functions of the faculties had been contemplated with a philosophical eye, a system of the philosophy of the human mind presented itself, almost spontaneously, to view, "not like others presented to us, which ap- "pear in comparison but as mere diagrams, the result "of study and imagination; whilst this seems like a "portrait from life by masterly hands *." When the work of discovery had proceeded a certain length,

* Reflections on GALL and SPURZHEIM's System of Physiognomy and Phrenology, by JOHN ABERNETHY, F. R. S., &c.

the facts appeared to be connected by relations which it was impossible sooner to perceive; and system and arrangement at length suggested themselves where disorder only had previously reigned. Hence, it was not till after Phrenology had been cultivated for several years, that its real nature and utility were discovered, and it was only then that its form became systematic. Hence, also, its character and its name changed as it proceeded; and from a mere species of physiognomy, it has become a science capable of the most useful and interesting applications. If, from the beginning, the discoveries of Drs GALL and SPURZHEIM had assumed the aspect of a regular and polished science, and been moulded into complete accordance with the prevailing doctrines of the times, it would have been clear that they were theorizing; for a beautiful and perfect system could not arise at once out of the observation of facts. The history of discovery in chemistry, and the other experimental sciences, shews, that facts in nature may, for a time, appear, not only isolated and uninteresting, but absolutely inconsistent and perplexing, until future discoveries shall have linked them into the chain of causation, and exhibited them in all the beauty and importance of essential parts in a system of truth. The very fact, therefore, that out of this mass of incoherence and apparent inconsistency, there has at last arisen a system of philosophy deserving of admiration, creates a strong presumption that it is founded in nature.

But, it may be proper to go a little more into the detail of the advantages which Phrenology is calculated to confer on the philosophy of the human mind. In the *first* place, then, MAN, as existing in this world, is compounded of a thinking principle and a material body. The thinking principle, cannot by *itself* become an object of philosophical investigation, because, in this life, so far as we know, it neither acts nor can be acted upon, except through the medium of corporeal organs. The most sublime productions of the poet's fancy, and most powerful arguments of the impassioned orator, certainly the purest and most etherial of all the impressions conveyed to our minds, do not, and cannot, as we are at present constituted, reach us but through a material eye or a material ear. Our growing vigour as we rise from infancy to manhood, and decreasing energies as we descend from manhood to the grave, remind us also of the soul's alliance with the dust. If, then, in this life, organization is so indispensable to the manifestations of the mind, and exerts so great an influence over them, no system of the philosophy of man is entitled to the name which neglects its agency, and treats of the mind as a disembodied spirit: And yet, LOCKE, REID, and PALEY, STEWART, and BROWN, are as silent upon the organs of the mind, as if the mental functions were performed independent of the body. The Phrenologist, on the other hand, regards man as he actually exists, and, (to adopt

the ideas of Mr STEWART), desires to investigate the laws which regulate the connection betwixt the organs and the mind, but without attempting to discover the essence of either, or to explain the manner in which they are united. The method which he follows, namely, that of comparing the power of manifesting particular mental faculties with the development of particular portions of the brain, is philosophical in the most rigid sense of the term; and only prejudice and ignorance can undervalue the object of his investigation, or state any serious objection to the means.

In the *second* place, philosophers and the vulgar speak frequently of the "faculties of the mind;" and we may be entitled to presume, that they attach some meaning to this expression; but when we enquire at the philosophers what is implied in the phrase, and how many faculties they admit, we find the very fact of the *existence* of faculties still under dispute. Dr REID observes, that metaphysics may "be truly called *an analysis of the* "*human faculties*, and till this is performed, it is "in vain to expect any just *system* of the mind, "that is, an enumeration of the *original powers* and "laws of our constitution, and an explication from "them of the various phenomena of human nature." *Inquiry*, p. 11. A late and ingenious writer in the Quarterly Review, comments on this passage, in the following terms. "Here, then, says he, it

" might reasonably be expected, that the *real and* " *substantial existence* of these ' *simple and un-* " ' *compounded faculties,* which it is the peculiar " ' province of philosophy to analyse,' should be a " matter that either had never been supposed to " admit of any controversy, or else, that it had at " least been regularly discussed and satisfactorily " demonstrated. Our readers, however, will per- " haps be surprized to hear the fact. So far is it " from being true, that the theory of the mind " which Dr REID assumes, is a point which no " person had dared to dispute, that there is hardly " a metaphysician of any celebrity, who has not " thought it necessary to warn his readers against " the false notion, or, as they conceived it to be, " the vulgar error, upon which the whole of his " philosophy, considering it as a *system,* is entirely " built."—*Quarterly Review,* No. 52. p. 493.

From these passages, we perceive a plurality of faculties assumed as the basis of the philosophy of Dr REID, while the very existence of separate faculties is denied by the English Reviewer. This point, indeed, has been long agitated between the metaphysicians of England and Scotland, and they are still far from being unanimous in regard to it. The inquiry, therefore, is curious, how the phrase " facul- " ties of the mind" should have come to be invented, and why, when occurring in ordinary composition, it is so easily intelligible, while *philosophical* difficulties of such magnitude attend its explication. When

we observe men in society, we perceive great diversities in their intellectual endowments and moral dispositions; one individual is mild and charitable, another is hot and intolerant; this man is remarkable for an acute and discriminating intellect, but deficient in generalizing power; that individual displays a gigantic scope of comprehension, but has much difficulty in correctly apprehending matters of detail. GEORGE BIDDER, at the age of twelve, was able to solve in his mind, and without the aid of notation, the most intricate questions in algebra; while many persons of mature age, and comprehensive understandings, experience the greatest difficulties in learning to perform the same operations. In Edinburgh, an idiot is seen upon the streets who whistles correctly several tunes, but cannot connect three abstract ideas; while we all know men of powerful intellects, who cannot perform three notes of the gamut. When these facts are seen and considered by men of plain sense, they are impressed with the conviction that the human mind is endowed with a variety of powers; that they are bestowed, some of them in a higher and others in a lower degree, on each individual; but that no person possesses them all in perfection, or is entirely destitute of any. By the natural constitution of our minds, we instinctively form conclusions upon facts submitted to our observation, and adopt them as fixed principles of belief, although we are frequently unable to specify the steps by which they were at-

tained. In this manner, by an insensible induction, mankind in general have come to regard inequality of talent and disposition, even in the same individual, as the result of natural constitution; and have never acted upon the belief, that every variety of mental excellence is necessarily present, because one eminent talent is possessed: In other words, they have conceived the mind to be endowed with a plurality of powers, and these to be enjoyed, even by the same individual, in unequal proportions. Hence the belief, on the part of the public, in the existence of distinct faculties * of the mind, is easily accounted for; and their ready understanding of the expression is also explained.

This notion, however, stands opposed to the doctrine of many highly esteemed metaphysical authors. Mr ADDISON states, that "what we call the faculties of the soul, are only the different ways or modes "in which the soul can exert herself." † Dr JOHN-

* I use the word Faculty throughout in the Phrenological sense, as meaning a mental power of a particular kind, either of propensity, sentiment or intellect, attached to a particular portion of the brain, and varying in natural energy as the organ varies in size. The works on Phrenology enumerate and describe the different faculties.

† *Spectator*, No. 600.—Mr STEWART quotes this passage in his preliminary dissertation to the Encyclopædia, and approves of it. While writing his Elements of Intellectual Philosophy, he appears to me to have been sometimes impressed with the popular notion, that the mind possesses a plurality of powers, each having a specific function, and at other times with the opi-

SON observes, that " the supposition of one man ha-
" ving more imagination, another more judgment,
" is not true. It is only one man has more mind
" than another. Sir, the man who has vigour may
" walk to the east as well as to the west, if he hap-
" pens to turn his head that way." Although neither ADDISON nor JOHNSON were metaphysicians, yet, in these remarks, they delivered, in a popular form, the doctrine of LOCKE *, which has been embraced by many writers since his day, and appears to constitute the creed of the Quarterly Reviewer. LOCKE in particular states it as a *fault* " that faculties have been spoken of and repre-
" sented as so *many distinct agents*." If the faculties are nothing more than different modes in which the mind exerts itself, how can we account for the facts before adverted to, of the same individual possessing great power of exerting the mind in one way, and very little of exerting it in another, or for many of the phenomena occurring in insanity? FODERE', for example, in his " Traité du Goitre, et
" de la Cretinisme," remarks, " that, by an inexpli-
" cable singularity, some cretins endowed with weak
" minds, are born with a particultar talent for copy-
" ing paintings, for rhyming, or for music. I have
" known, says he, several who taught themselves to

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nion stated by Mr ADDISON; and hence some occasional inconsistencies seem to have crept into his views.

* Book ii. chap. 21. § 20.

" play passably on the organ and clavecin; others who " understood, without ever having had a master, the " repairing of watches, and the construction of some " pieces of mechanism," p. 133. PINEL, in his " Traité de l'alienation mentale," mentions the case of a patient, who, as he remarks, would have presented an enigma to LOCKE and CONDILLAC, according to their notions of the mind. " He was subject " to periodical attacks, during which he felt a horri- " ble furor, which made him, by an irresistible pro- " pensity, seize hold of any instrument or offensive " weapon, to kill the first person he should see. He " felt an internal *combat between that ferocious im-* " *pulse and the profound horror with which such* " *a crime inspired him.* There was no wandering " of memory, of imagination, or of judgment. He " avowed to me that this propensity to commit a " murder was absolutely forced and involuntary, " and that his wife, whom he tenderly loved, was " near falling a sacrifice to it." Many similar facts might be stated; but it is unnecessary to adduce them, as every individual must have felt contending emotions arising involuntarily in his mind, which, with all the aid of his intellectual powers, he was not able to allay, and could scarcely restrain from outward manifestation. If, therefore, the term Faculty means merely a mode in which the mind exerts itself, and if the faculties have no peculiar agency, from what sources could the furious impulse to destroy, the sentiment of horror at the

desire, and the exercise of reflection to curb it, all existing simultaneously in the above mentioned individual, proceed ?

The interest of the question concerning a plurality of faculties continues to encrease, when we enquire *into the origin of the mysteries* with which metaphysicians have contrived to envelope it. If they had simply observed the phenomena of human nature, it is difficult to conceive how they could have come to doubt upon the subject; for the same diversities of genius and dispositions, which have so forcibly impressed ordinary observers with the notion of distinct faculties, must, one would naturally imagine, have carried home a similar conviction to them. But, with the view of penetrating deeper than the vulgar into the elements of the mind, they directed their attention chiefly inwards to the subjects of their consciousness, and hence their difficulties arose. The consciousness of each individual reveals only the various mental changes of a single thinking and sentient principle; and it is with extreme difficulty that he can detect those separations in its powers, which the facts furnished by observation upon others, would lead him to expect. A person may be conscious of a great facility in abstract reasoning, and of an insensibility to music; but there is no *very palpable* circumstance attending the mere consciousness of either fact, which would readily prompt him to conclude, that his mind possessed two distinct faculties,

one for reasoning, and another for receiving the impressions of melody. He might think, that one faculty would suffice for both offices, although, owing to some peculiar circumstance which he could not explain, it was unable to perform one part of its functions with the same success as it performed the other; and hence, he might reasonably question the whole popular belief on the subject of a variety of powers, and come to regard it as nothing better than a "vulgar error." This accordingly appears to have been the fountain whence the metaphysical difficulties on this subject have flowed *.

The next point is to shew in what manner Phrenology will diminish or remove the obscurities attending this long agitated question. If we attend to the development of the brain, and observe, that all persons having a large pyramidal eminence on the upper part of the middle of the forehead, (such as Dr CHALMERS, the Reverend GEORGE CROLY, and Mr WILLIAM TENNANT), possess an extraordinary talent for tracing analogies, and making forcible comparisons; and that those whose heads are hollow in this particular part, shew a manifest difficulty in finding illustrations, and, in their writings and discourse, rarely compare or reason ana-

* At the same time, it appears to me, after mature reflection, that consciousness does give us some intimation of the existence of a plurality of *faculties*, although it affords no information concerning the *organs* of the mind.

logically; the dullest understanding may conceive, that a special power of the mind is connected with this part of the brain, and we may learn its nature by means of *observation*, without much metaphysical acumen. If, on extending our remarks, we discover that persons, in whom the portions of brain lying on each side of the part last mentioned are large, possess the talent of tracing abstract and profound relations, such as occur in metaphysics, and political economy, with a degree of facility and success bearing a proportion to the development of the parts, and that many individuals possess this power and organ in an eminent degree who are deficient in the first, and *vice versa*, we would be furnished with data for believing in another faculty of the mind, and would be enabled to determine its functions. If, on the most extensive observation, we found other intellectual faculties, and also the power of experiencing the moral sentiments, such as Justice, Benevolence, Veneration, and others, likewise connected with particular portions of the brain, and exhibiting a strength corresponding to the size of the organs, the *existence* of these faculties and sentiments, *as distinct powers* of the mind, would be established upon evidence closely resembling that on which the conclusions of physical science depend. If we found, too, that, by the internal activity of an organ, the propensity, sentiment, or intellectual power connected with it, was excited into action, the difficulties attending the cases men-

tioned by FODERE' and PINEL would disappear. If, in a Cretin, the organ of Tune were large and active, he might learn music with facility, although, on account of other organs being small, he could not reason, or if the organ of Constructiveness were large and active, he might be capable of repairing watches, and his intellectual deficiencies continue unabated. In like manner, if in PINEL'S patient the organ of "Destructiveness" was excited into diseased activity, the impulse to destroy might be strongly experienced, while the greatest horror at the desire might be felt, by means of the faculties and organs of the moral sentiments, if these remained unimpaired. The intellectual powers, too, might be exercised in restraining the propensity, as long as their organs were unaffected by the disease.

The doctrine of a plurality of faculties here stated, is clearly consonant to popular belief, and indeed is implied in the very structure of ordinary language; and, considering the point abstractly, nothing appears more natural than that these distinct powers should possess separate organs, just as the various senses operate through the medium of different nerves. The difficulty, therefore, in admitting this view of our mental constitution, occurs only with the philosophers, and their objections to it, also, will probably disappear, when they bestow on Phrenology the degree of attention which its importance demands.

It is proper to observe, however, that the Scotch metaphysicians in general, adopt the opinion, from whatever source derived, that the mind manifests a plurality of faculties; but other questions of great importance have been debated among them which continue undetermined, namely, what are the nature and laws of these primitive powers, and what their number? If I apprehend aright, the object of the investigations of Dr REID, Mr STEWART, and Dr THOMAS BROWN, has been to present an *analysis* of the human faculties, with the view of exhibiting *a just system* of mental philosophy; but it is well known that no two of these authors agree in the results of their analysis, and that the most powerful arguments are used by one, to prove that certain principles admitted by another are not entitled to be regarded as primitive faculties of the mind, and that, up to this hour, no *system* of mental philosophy has appeared, which has been even generally received. Phrenology, by presenting to observation a corporeal organ, by means of which a particular faculty manifests itself, will tend considerably to do away with the airiness and shadowy uncertainty which at present attend this branch of metaphysical science. For example, when a sufficient number of instances have been observed, in which the power of experiencing the sentiment of Justice has been strong, when a certain part of the brain has been large, and weak when the same part has been small; it will be difficult to dispute longer

the existence of such a primitive sentiment, although it has been contested for the last 2000 years. In the same way the existence of other faculties will be ascertained; and by this mode of philosophizing, any point which has once been fixed, will not be liable to be again shaken loose and subjected anew to uncertainty and doubt. At the same time, scope will be given, in prosecuting Phrenology, for the refined analysis and profound speculation, which constitute the delight and the glory of the metaphysician; for while the general function of each faculty and its organ will be discovered by observation, it will only be by means of reflection on consciousness, that the ultimate principles and limits of demarcation of each will be scientifically ascertained.

In the *third* place, it may be observed, that the slight relation of the metaphysical systems of mental philosophy to the actual dispositions and talents of men, and their consequent limited utility, have been subjects of complaint from the remotest ages. Phrenology, on the other hand, contains elements, by the various combinations of which, every variety of sentiment and intellectual power occurring among individuals may be explained, not by an arbitrary use of terms, and an invention of faculties to serve in each emergency, but by a rigid application of fixed and philosophical principles, announced as essential parts of the science. If, indeed, we were to make an extensive survey of

the works of metaphysical writers in general, and of authors who have written upon Moral Philosophy in connection with Metaphysics, it is probable that we might find all, or the greater part, of the Phrenological powers admitted by one or other of them as elements of the human mind; but the faculties stated by one are denied by another, and no one system is to be met with, in which several of the most important active principles of our nature, which fill the world with half the bustle by which its daily scenes are agitated, are not either entirely omitted, or ascribed to secondary laws of the mind, altogether inadequate to account for the phenomena which they are brought forward to explain. Those Members of the Society who are familiar with metaphysical science, will readily recognise the correctness of these remarks; and, were this a proper occasion, it would be easy to establish it by numerous examples. For the sake of illustration merely, I shall select a few instances of principles admitted in Phrenology, but omitted in the works of REID, STEWART, and BROWN, the latest and most esteemed metaphysical writers of Scotland; and concerning the existence of which, some judgment may be formed by ordinary observers of human nature, who are not attached to any particular system of mental philosophy.

The Phrenologists admit "Adhesiveness," or the instinctive tendency to attachment, as a primitive principle of the mind. The authors above alluded

to either entirely omit the feeling, or treat of it under the general aspect of " a desire for society." They do not speak of its effects, when strong or weak, upon the dispositions of individuals, nor do they represent its influence in the domestic sphere, which is, in fact, the chief field for its exercise. These authors advert to " Instant Resentment " as a feeling of the mind; but this supposes an antecedent injury to call it forth, and they leave entirely out of view the effects of " Combativeness " as an *active principle*, operating independently of aggression; and which, when active in a high degree, produces, in some individuals, a tendency to combat, oppose, and dispute, in words or deeds, so as to form a distinctive characteristic of their dispositions. The metaphysical emotion of " Instant resentment" affords no explanation of the pleasure derived from the battles of Gladiators and Boxers, from Bull-bating, and similar exhibitions. The phrenological propensity of " Combativeness" being, in its primitive essence, a disposition to contend, explains the source of these delights at once; for the spectacle of a combat directly gratifies it. The authors before mentioned treat of the emotion of " Anger," but this also supposes previous provocation; and their account of the feeling gives no glimpse into the real nature of that faculty of the mind (by Phrenologists named " Destructiveness *"), which,

* Dr Reid, in Essay III. chap. vii. v. and iii., and Dr Thomas Brown, in vol iii. p. 324, of his Lectures, describe accu-

as an active principle, impels man to hunt and kill, makes him continue to receive gratification from hunting and killing, long after all necessity for doing so, as a means of subsistence, has ceased to exist; which gives him the tendency not only to overcome, but to destroy, every object that rises in opposition to his will, and hence leads to the devastations of war. Anger, or passion, is thus regarded by Phrenologists as a mere external expression of this propensity, when provoked by injury, real or supposed *.

The metaphysicians do not admit "Constructiveness" as an instinctive tendency, but suppose it to be the result of understanding †. Children, however, frequently excel in fashioning a variety of figures of animals and things, long before their understandings are matured. Partial idiots, also, have been known to excel in mechanics; while some men of great talents have been unable to draw, fabricate or construct; and, in short, the fact is undeniable, that genius for works of art is not possessed in proportion to the strength of the under-

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rately the effects of the Combative and Destructive propensities, when excited by aggression. See also STEWART's Outlines of Moral Philosophy, p. 150. § 154.

* The reader is referred to an interesting account of the faculties of Combativeness and Destructiveness, by Mr SCOTT, in a subsequent part of this volume.

† REID, Essay III. chap. ii.

standing. They do not allow "Acquisitiveness*" to rank as a primitive principle of the mind, although it is one of the strongest and most general impulses of our nature, and, in fact, the fountain of wealth, by the tendency which it produces to acquire, for the mere pleasure of possessing. They resolve it into the love of power, or the desire for the gratification of some other feeling, and yet many men stifle and control every other passion to expend their whole energies in the pursuit of wealth, which they never attempt to enjoy. Farther, men of observation, acquainted with the world, will at once recognize the existence of persons extremely prone to duplicity and cunning, and who seem incapable of proceeding openly and directly to their object in the business of life†. Now, the metaphysicians before mentioned, treat of no faculty or faculties, by the use or abuse of which such a disposition can be accounted for. The Phrenologists, on the other hand, have discovered the propensity of "Secretive-"ness," the legitimate purpose of which is to suppress and restrain from outward manifestation the desires and emotions which arise involuntarily in the mind, till the reasoning faculties shall have passed judgment on their propriety; and which, when over active and abused, produces cunning and

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* Ibid., and STEWART's Elements, p. 388. Outlines, p. 92.; and BROWN, vol. iii. p. 474.

† See an Essay on Cunning, by Lord BACON.

duplicity. Observation shews it also to be indispensable to the player, the dramatist, and the painter, so that, although those persons were endowed, in the most splendid degree, with all the metaphysical faculties, yet, if they were destitute of Secretiveness, they would be incapable of succeeding in these arts; of this fact the metaphysicians had no idea *.

The emotion of " Fear," also, is familiar to every reflecting mind, as a simple feeling, and yet it is not distinctly treated as such by the authors already alluded to. The Phrenologists name the faculty on which it depends " Cautiousness," and regard it, like the other feelings already discussed, as an active principle, influencing the conduct in habitual actions, independent of excitement by the presence of imminent danger. In society we meet with persons whose characteristic disposition is extreme hesitation, and with others who are as remarkable for extraordinary rashness and precipitancy of conduct. In the metaphysical systems, before mentioned, no feelings or faculties are noticed, the use, the abuse, or combinations, of which, enable us to account for these peculiarities. Phrenological observation shews that the former have large, the latter small, organs of Cautiousness.

In the department of the Intellectual Faculties,

* See Mr Scott's Observations on Secretiveness in the paper before alluded to.

the systems of these metaphysicians are not more available to the explanation of the phenomena of ordinary life. They divide the Intellectual Powers into Perception, Conception, Memory, Imagination, and Judgment; and as each of these supposed faculties is treated in a general way, as if its functions were universal within its own sphere, we are led to expect that he who possesses an eminent faculty of perception in one way, should possess equal power in all; or, that he who enjoys a retentive memory for one department of knowledge, should have equal powers of recollection in every other; but these inferences, although legitimately following from metaphysical premises, are at variance with undeniable facts. We find in society, for example, one individual eminently distinguished by the natural power of conceiving elegant forms, who, from birth, has been deficient in the power of perceiving differences in colours *. George Bidder possesses the most astonishing power of perceiving the relations of numbers, but is by no means equally distinguished for the acuteness of his perception of melody. Some individuals possess a ready and retentive memory for mathematics, who find great difficulty in recollecting the facts of natural history; others display great powers of memory in this department of science, who are incapable of recollect-

* Mr James Milne, whose case is reported in a subsequent part of the Transactions, is an example in point.

ing metaphysical deductions; while a third class of persons, recollect logical demonstrations with facility, who, nevertheless, are unable to recollect mathematical propositions or historical details. The metaphysical systems contain no elements capable of accounting for these differences in the power of applying the supposed faculties of Perception, Conception, &c. to different classes of objects; while the discoveries of Phrenology completely explain them. It is found by observation, that the power of perceiving melody is in connection with one portion of the brain; and that, if the part be large in any individual, he will possess an eminent facility in perceiving, conceiving, and remembering, musical notes. This, however, is a distinct faculty, and its presence, in a high degree, does not imply that equal powers of perception and recollection as to other classes of objects are possessed. On the contrary, if, in another individual, the part of the brain, which is discovered to be the organ of "Causality," be largely developed, and if "Tune" be small, he may be distinguished for great acuteness of perception, conception, and memory, on subjects connected with abstract science, and be quite incapable of perceiving melody, and of recollecting a single tune.

To prevent misapprehension I beg to repeat, that the foregoing examples are cited only for the sake of conveying, in a general and popular way, a notion of some of the points of difference betwixt the metaphysical theories and the phrenological system,

and are not brought forward as embracing a full and correct statement of the whole questions which might be agitated between them. It is only by a very intimate acquaintance with both, that an adequate conception can be formed of the great superiority of the new system over the old, in its capability of application to explain the phenomena of human nature in general; and in an introductory discourse it is improper to enter into numerous and extensive details.

In the *fourth* place, Supposing, for the sake of argument, that the metaphysicians have been successful in their analysis of the faculties, and that they have exhibited *a correct system* of the philosophy of the human mind, so far as an enumeration of the primitive powers is concerned, I proceed to remark, that the faculties are possessed by different persons in different degrees, and in different ratios; and that these philosophers have not explained the effects of such differences on the dispositions and talents of individuals. The existence of differences of talent is noticed by Mr STEWART himself, and described with his usual felicity of expression: "One man," says he, "possesses a rich and beautiful fancy, "which is at all times obedient to his will. Ano-"ther possesses a quickness of recollection, which "enables him, at a moment's warning, to bring to-"gether all the results of his past experience, and "of his past reflections, which can be of use for il-"lustrating any proposed subject. A third can,

" without effort, collect his attention to the most " abstract questions in philosophy; can perceive, at " a glance, the shortest and most effectual process " for arriving at the truth; and can banish from " his mind every extraneous idea, which fancy or " casual association may suggest, to distract his " thoughts, or mislead his judgment. A fourth " unites all these powers in a capacity for perceiv- " ing truth with an almost intuitive rapidity; and " in an eloquence which enables him to command, " at pleasure, whatever his memory and his fancy " can supply, to illustrate and to adorn it."—*Elements*, p. 336.

In this passage, the nature and extent of the intellectual differences among men are explicitly presented to our notice: but Mr STEWART does not venture on any explanation of their origin; nor does he even attempt to point out how they could be produced by any combinations of the elementary principles enumerated by himself. In this department of the philosophy of man, in short, not one inch of ground is cultivated or improved. Mr STEWART is aware equally of its importance and forlorn condition, and observes, that " the varieties of intellec- " tual character among men, present a very interest- " ing object of study, which, considering its practical " utility, has not yet excited, so much as might have " been expected, the curiosity of our countrymen."—*Dissertation*, part ii. p 198. Well might Mr STEWART anticipate its " *practical utility*;" for,

if metaphysical science can yield fruit in any department, it may be expected to do so in this, as I shall immediately shew. Chemistry, for example, would be little esteemed for its practical utility, if it enabled its professors only to deliver elegant and ingenious discourses concerning the elementary principles of matter, but not to combine them so as to produce beneficial results, or to analyse the combinations which exist in nature, so as to discover the manner in which they are calculated to act; and yet this is the condition of metaphysical philosophy at the present moment, viewing its merits even in the most favourable light. Its supporters do not pretend to have accomplished more than pointing out the elementary principles of mind, and some of their laws, leaving the effects of their combinations wholly unexplained. The result of differences in the combinations, however, is to render an individual fit for one situation, and inadequate to fill another; and, on this account, the philosophy of mind cannot become practically useful, until it afford means of ascertaining the precise degrees in which the primitive faculties are combined in each particular person. If parents, for example, could obtain a correct view of the relative strength of the different mental powers in their children, they could form reasonable conjectures concerning the offices which they were calculated to execute. They could discriminate in which direction their natural strength or weakness lay, and could dispose of them so as to cherish the one,

and avoid reliance on the other. It is obvious, that, if the science of Mind were in the same state of forwardness as Chemistry or Natural Philosophy, society would now be reaping these fruits of its cultivation; and, if it is still so far distant as Mr STEWART admits it to be, from this desirable condition, after all the labour and ingenuity which have been expended in its fields, we ought at least to listen to any system that promises to brighten its melancholy aspect.

Phrenology, then, holds out good grounds for expecting an improvement. Those who advocate its truth, maintain not only that particular mental powers are connected, by nature, with particular portions of the brain; but that the native energy of each primitive tendency and talent, bears a relation to the size of the organ; and, if such be the case, then, by attending to the relative size of the different cerebral parts, in each individual, the natural energy of his several mental powers may be correctly and philosophically ascertained. For example, when the organs of Ideality, Wonder, and Hope, are found in any person to be large, and those of Cautiousness and Reflection small, his dispositions are observed to be gay and precipitate, and his intellectual powers limited and superficial. Where, on the other hand, the organs of Cautiousness, Conscientiousness, Firmness, and Reflection are perceived to be large, the individual is observed to be grave, serious, prudent, and circumspect, and possessed of a penetrating under-

standing. Possessing knowledge of this kind, the situations in which such persons would be fitted to act, with the greatest chances of success, might be divined by parents of ordinary powers of reflection.

In the *fifth* place, the manifestations of the mind are subject to derangement; and a true theory of intellectual philosophy ought to contain principles capable of explaining the mental phenomena, both in a state of health and disease. The present practice of society, however, in cases of insanity, affords a striking illustration of the opinion generally entertained respecting the knowledge of the mind possessed by metaphysical philosophers. Young men, receiving a liberal education, attend courses of lectures on logic and moral philosophy, where the powers and laws of the mind form the leading subjects of discussion: and they bestow many hours on the private study of LOCKE, HUME, REID, STEWART, PALEY, and BROWN; but when a question occurs respecting the state of mind of an individual who is suspected of alienation, do courts of law resort to these gentlemen, or their instructors, for evidence respecting the real condition of his mental powers? No. So little do they imagine this class of persons to know about the mind in a state of disease, that they are in the practice of appointing guardians to lunatics, on the attestation of a medical practitioner who probably had never made metaphysics an object of study, when they would decline to listen to the certificate of a metaphysical professor, as evi-

dence of insanity. In short, by the present practice, the mind, in health, is studied in schools and colleges as a branch of abstract science, with little relation to the affairs of life, and with as little reference to the body, as if it existed in this world as a spirit unconnected with matter; but no sooner do the manifestations become diseased, than all these speculations are abandoned as useless, and the physician is called in to determine on the existence of mental disease, and to effectuate a cure, without relation to metaphysical science. Such a disjunction could not occur, were Phrenology received as the standard philosophy of mind. The Phrenologist views the mental powers, at all times, as in connection with the organs. He studies the effects of every state of the organization on their manifestations; and, on contemplating a case of mental alienation, instead of finding, like the metaphysician, his knowledge altogether inapplicable, his philosophy sheds light on the symptoms, and can therefore cooperate with medicine in suggesting suitable modes of treatment *.

In the *sixth* place, the laws and institutions of society emanate from the primitive dispositions and

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* In the answer to Dr Barclay's Objections against Phrenology, in a subsequent part of this volume, some examples will be found of the explanations afforded by Phrenology of the phenomena of partial derangement, to which I beg leave here to refer.

intellectual faculties of man; but, until a successful analysis of the latter is presented, and the dependence of the former upon them clearly pointed out, we must remain, in a great measure, in doubt, whether many of the regulations which men are called upon to observe, are the *legitimate dictates of nature*, the casual offspring of chance, or merely the abuses of authority, established under various systems of government, for the advantage of a part of society at the expense of the rest. In searching for principles also, to guide our taste and judgment in literature and the fine arts, it is obvious that a correct view of the ultimate principles of the mind, and of the effects of their combinations, must be of the last importance. While these points remain in obscurity, there is little check upon the attempts of presumptuous individuals, who endeavour to erect themselves, and their productions, into standards of excellence, and subject the public to the dominion of vicious fashions, instead of the dictates of a correct taste.

Impressed with these views of the importance of Phrenology, a few individuals of the city of Edinburgh, resolved to form themselves into a private society, for the purpose of cultivating the science, and communicating freely to each other their experience and observations on the subject. The project originated with the Reverend David Welsh, and was carried into effect by the following resolutions.

" Edinburgh,

" 8. *Hermitage Place, Feb.* 22. 1820.

" At a meeting of gentlemen, favourers of the Phre-
" nological System of Drs Gall and Spurz-
" heim,—present,

" George Combe, Writer to the Signet,
" James Brownlee, Advocate,
" Andrew Combe, Surgeon,
" William Waddell, Writer to the Signet,
" Lindsay Mackersey, Accountant, and
" The Reverend David Welsh.

" It was resolved,

" 1*st*, That the gentlemen present shall form " themselves into a Society, which shall be denomi-" nated The Phrenological Society.

" 2*dly*, That the object of the Society shall be, to " hear papers, and to discuss questions on subjects " connected with Phrenology; to hold a correspon-" dence with societies and individuals who may take " an interest in the system; and thus to collect and " preserve facts and views that may improve and en-" large the boundaries of the science.

" 3*dly*, That, in the mean time, the Society " shall be strictly of a private nature, its meetings " being held in the houses of the different members, " to which no visitors shall be admitted.

" 4*thly*, That the meetings of the Society shall " be held once a fortnight, on Monday evening, at " 8 o'clock.

" *5thly*, That the Members shall preside at the " meetings in rotation.

" *6thly*, That the Members shall read Essays in " rotation."

Mr WADDELL subsequently withdrew, for a time, from attendance at the meetings of the Society, for reasons assigned to the satisfaction of the Members; but these having ceased to operate, he again joined, and his name appears in the list, of the date of his second admission. The other gentlemen continued to meet regularly, and to read essays during the spring and summer of 1820; and, by 28th November of that year, their numbers had been so much reinforced by new accessions, that the Society was, on that day, declared public, and the meetings transferred to an apartment in the College. It has subsequently occupied a hall in Clyde Street, and commenced forming a collection of casts and skulls, which are exhibited in that place, on Saturdays, to the Members, and visitors introduced by them. The history of the Society, since it assumed a public form, will be found in its Transactions; but it is proper to advert, in this place, to one point, to prevent misapprehension on the part of the public, and to do justice to the individual members. Each gentleman, at his admission, declares his conviction of the truth of the general principles of the science, viz. that there is in nature a connection or correspondence between certain mental powers and moral feelings, and certain portions of the brain, and that the

energy of the power bears a relation to the size of the organ; but no one is required to profess his belief in the whole, or any given number of the faculties and organs specified in the books upon Phrenology, nor to give his assent to the metaphysical notions which individuals have ingrafted on the phrenological doctrines. Those Members who founded the Society, recollected the slow and almost imperceptible steps by which they themselves had advanced through a multitude of observations, to a comprehensive view and full conviction of the truths of the science, and were therefore disposed to make the most liberal allowances for difference of opinion on points of detail, among those who still required experience to enable them to embrace the system in its fullest extent. They judged also, that no person who had been convinced, by observation, of the existence of a plurality of faculties and organs, could hesitate about the advantages to be derived from minute and patient inquiries into the subject; and, as investigation was their aim, they assumed only the general principles as the point of union among the members, and invited every one to bring forward the results of his experience and reflection, as appropriate commentaries upon them.

This latitude of belief was rendered necessary also on another ground. No opportunities of acquiring a practical knowledge of the doctrines existed in this country previous to the institution of the Society, and few minds possess the zeal and energy re-

quisite for becoming intimately acquainted with an extensive science from the perusal of books alone. Those, therefore, who became members, associated themselves for the sake of gaining and communicating a knowledge, in the first instance, of what had been already accomplished by the founders of Phrenology, and in the hope of being able only eventually to enlarge its boundaries by their own observations. The present publication is intended to proclaim the existence and the views of the Society; to hold it out as a point of union to those who take an interest in the doctrines; and to invite future communications.

Before concluding, I beg leave to add a few observations on the nature of the evidence on which Phrenology rests.

The proposition, That a certain mental power is connected, by nature, with a certain portion of the brain, relates to physical science, and can be proved or disproved only by observation. The province of reason, in such a case, is to compare the phenomena observed,—to discover their relations,—and to draw from them just conclusions;—but not to determine, beforehand, whether the appearances alleged can, or cannot, exist in nature. Those persons, therefore, who attack the doctrines by mere arguments, whether founded on analogy or on previous opinions, only render complicated a question which in itself is simple; for, if the facts alleged by the Phrenologists

really exist, all reasonings which go to contradict them, must of necessity be defective in premises, or unsound in deduction; and, if they do not exist, the whole fabric of the system will fall to the ground, without the aid of any other objection.

The next consideration is the mode of bringing forward the evidence by which the science is supported.

Delicacy to individuals stands opposed to the public statement of many interesting cases in favour of the doctrines. For my own part, I have been permitted minutely to examine the heads of several hundred persons, in different ranks of life, many of whom are well known by their talents as authors, preachers, public speakers, artists, &c. and the correspondence betwixt their mental qualities and cerebral development was such as carried irresistible conviction to my own mind, that Phrenology is a correct exposition of nature; but the confidence implied in permitting the examination, imposes a restraint upon publication of the results, which no consideration will authorize me to disregard. It is on this account, that Phrenologists eagerly solicit those who wish to ascertain the truth of the system, to examine nature for their own satisfaction. Busts are sold, which indicate the situations of the organs, and books which describe their functions; and no one can have any difficulty in finding proper subjects for examination among individuals, in his own circle, with whose talents and

dispositions he is intimately acquainted. If, for example, two children are known, one of whom is extremely timid, and the other rash and precipitate, their heads may be placed in juxta-position, and their organs of Cautiousness compared. The difference will be found to be so striking, that the most inexperienced observer may recognize it. In like manner, if of two girls, one be particularly fond of admiration, and another be indifferent about her appearance, and regardless of the opinion of others, they may be placed in a similar situation, and a very palpable difference in their organs of Love of Approbation will be perceived. The degree of conviction resulting from observations of this kind, when repeated on a great variety of individuals, and in every diversity of circumstances, far surpasses that which can be produced by perusal of the most minute and authentic details of cases observed by others. By contemplating phenomena as they actually exist, the mind forms a judgment concerning the real nature of their relation to each other, with a higher degree of certainty and satisfaction, than can be attained by merely reading descriptions of their appearance, and of the order in which they occurred. In the former case, the inquirer satisfies himself by an examination of *all* the circumstances which he deems of importance; in the latter, he is apt to doubt that some material fact may have been overlooked, which, if stated, would alter the whole import of the experiment. These remarks are particularly appli-

cable to Phrenological investigations. By selecting for observation, persons intimately known to himself, the inquirer will enjoy the means of estimating the real nature and extent of the talents and dispositions possessed, — the actual appearance of the head,—the effects of health, education, and of a variety of circumstances which he might imagine were not attended to in investigations conducted by others.

The same restraints, however, do not oppose the publication of all cases bearing on the truth of Phrenology. When individuals have rendered themselves conspicuous by their virtues or vices, by their talents or deficiencies of understanding, and when casts of their heads have, by their own consent, been placed in the hands of the public, or been properly acquired, there appears to be no impropriety in discussing openly the correspondence or discrepancy betwixt their cerebral development, and the known manifestations of their minds. For example, a mask of Mr WORDSWORTH, the poet, is sold openly in the shops, and his poetry has long been committed to the public. Now, on measuring the distance across the mask, from the middle of the surface of one organ of Ideality to that of the other, I find it to be exactly 6 inches. Again, a bust of Dr CHALMERS, accurately modelled by Mr JOSEPH, is also sold, and his works are extensively read. On making the same measurement on his bust, I find the distance from Ideality to Ideality, to be $6\frac{3}{8}$ inches; and there appears

no impropriety in stating these facts, and delivering the opinion, that the works of Dr CHALMERS, although not in the form of verse, display occasionally higher traits of Ideality than those of WORDSWORTH, and that, in this respect, the organs and manifestations correspond. Perhaps, however, I err (but I know I shall be forgiven) in stating, that, in the head of Mr OWEN, of New Lanark, the same measurement will very little, if at all, exceed 5 inches (I speak from recollection), and that in his speeches and compositions he displays far less of Ideality (and I refer to no other quality) than either of the two celebrated persons already named.

Farther, where individuals have perished on the scaffold, and the Society has procured authentic casts of their heads or skulls, there can be no impropriety in discussing, in the freest manner, the correspondence betwixt their mental manifestations and the development of their brains.

In the subsequent pages of the Transactions, therefore, several cases of both of these descriptions will be introduced, for the sake of example, and exciting inquiry; but it is impracticable, in any moderate bounds, to bring forward the *whole*, or even any great proportion of the facts which are familiarly known to those who make Phrenology an object of serious study. At the same time, by throwing open to public scrutiny the whole collection of casts and skulls in possession of the Society, including those of many distinguished individuals, a mass of

evidence is presented which ought to be inquired into, before the science is condemned, or before those who support it are accused of passing fanciful opinions upon mankind, in place of substantial truths.

Finally, It is frequently stated, that Phrenologists bring forward only such cases as *support* their doctrines, and omit all notice of adverse instances: and the insinuation is broadly made, that if they were candid in their reports, one set of facts would contradict or neutralize another, and that the whole fabric of Phrenology would, in consequence, fall to the ground. Such statements are wholly unfounded; and, if adverse facts exist, why do not the opponents bring them forward into view? The line of conduct, besides, here imputed to Phrenologists, implies so much disingenuousness of purpose, nay, such moral depravity, that those who make the charge without supporting it by facts, merit only contempt and reprobation.

OUTLINES

OF

PHRENOLOGY, *&c.*

NAMES
— of the —
PHRENOLOGICAL ORGANS
referring to the figures indicating their
RELATIVE POSITION.

I. Propensities.

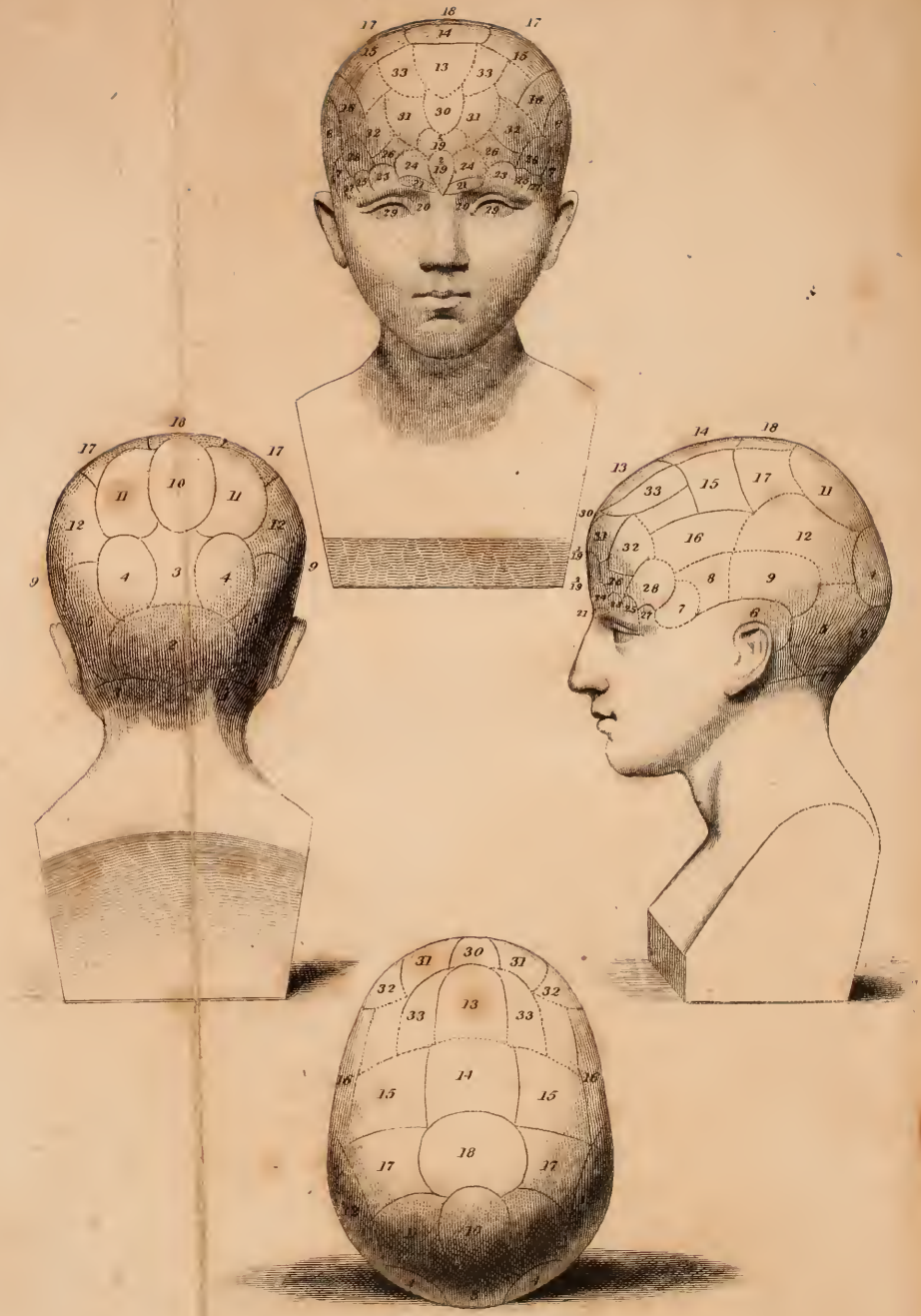
1. *Amativeness*
2. *Philoprogenitiveness*
3. *Concentrativeness*
4. *Adhesiveness*
5. *Combativeness*
6. *Destructiveness*
7. *Constructiveness*
8. *Acquisitiveness*
9. *Secretiveness*

II. Sentiments.

10. *Self esteem*
11. *Love of approbation*
12. *Cautiousness*
13. *Benevolence*
14. *Veneration*
15. *Hope*
16. *Ideality*
    Wonder
17. *Conscientiousness*
18. *Firmness*

III. Intellect.

19. *Individuality* { *1 — or higher* / *2 — or lower*
20. *Form*
21. *Size*
22. *Weight*
23. *Colouring*
24. *Locality*
25. *Order*
26. *Time*
27. *Number*
28. *Tune*
29. *Language*
30. *Comparison*
31. *Causality*
32. *Wit*
33. *Imitation*



OUTLINES

OF

PHRENOLOGY, &c.

PHRENOLOGY is a system of Philosophy of the Human Mind, and is founded on facts ascertainable by consciousness and observation. The name is derived from φρην mind, and λογος discourse.

It is a principle of physiology which cannot be disputed, that *dissection* alone can give us no information concerning the *functions* of the bodily organs. No anatomist, by dissecting the optic nerve, could predicate that its function is to minister to Vision; or, by dissecting the tongue, could discover that it is the organ of Taste.

Metaphysicians having confined themselves chiefly to reflection on consciousness, could not discover the organs of the mind; and Anatomists, having merely dissected the brain, could not discover the *functions* of that organ; and hence the comparative ignorance which has hitherto prevailed regarding that interesting point in the philosophy of man,—the connection betwixt the mind and his organic constitution.

Phrenologists have endeavoured to avoid the obstacles presented by these modes of philosophizing, and have compared manifestations of mind with development of brain, in a great number of individuals. The system now taught is the result of observations thus made; and the principal points which are conceived to be established by extensive induction are the following:

1*st*, That the brain is the material instrument, by means of which the mind carries on intercourse with the external world.

2*d*, That the brain is an aggregate of parts, each of which has a special and determinate function.

3*d*, That the form of the brain can be ascertained by inspecting the cranium; and that the functions of the several parts may be determined by comparing their size with the power of manifesting the mental faculties.

The Organs and their Faculties are the following:

I. Amativeness, or Physical Love.—This is an important propensity, and gives rise to the feelings which attract the sexes so strongly to each other. It is the source of that kindly interest which either sex feels in all that relates to the other; as well as of the stronger impulses of desire. These are its direct effects; but it produces others indirectly by its influence on the other powers. It acts, in many cases, as a stimulus to these, increases their activity, and brings them into a state of higher susceptibility. That love between the sexes, of which this is the origin, may be strengthened and prolonged by Adhesiveness, and other powers and sentiments brought subsequently into action.

The cerebellum is the organ of this propensity, and its size is indicated by the distance betwixt the mastoid processes behind the ears, or by the general thickness of the neck from ear to ear. Established.

II. Philoprogenitiveness.—The chief function of this faculty is to produce the love of children, or offspring in general: but it seems to give rise to a certain feeling of kindness, mingled with condescension, and almost compassion, for objects which are weak and helpless. In parents, the feeling is so far compulsory, as to be independent of any other qualities in the child than those of mere weakness and helplessness; and, as a proof of this, the more weak and helpless the child is, the emotion is felt the more strongly. In others, the feeling is less constraining, and more apt to be influenced by the appearance of qualities calculated to excite, at the same time, the other faculties,—such as beauty, vivacity, or intelligence. It is this chiefly which supports the mother under all the cares and troubles of rearing an helpless offspring, during nights spent in watching, and days passed in unavailing endeavours to pacify or relieve them; and that often independent of religion, morality, or the dictates of reason. When this organ is large, and 1. moderate, it gives a drooping appearance to the hind part of the head. When the faculty is strong, the individual is delighted at the sight of children, who, on the other hand, understanding its natural language, are rejoiced and flock around him when he makes his appearance. It is quite distinct from general Benevolence. Established.

III. Concentrativeness.—When Dr Gall first made observations upon this organ, he was led to believe its function to be a desire of inhabiting high places, because he observed it large in animals who were fond of these situa-

tions; such as the chamois, the eagle, and the ptarmigan. Farther observations shewed it to be large in those animals and persons who seemed attached to particular places, and who disliked much change of residence. It was then termed the organ of *Inhabitiveness.* From more enlarged observations, it now seems probable that part of its function is to maintain two or more powers in simultaneous and combined action, and to determine them towards one object.

This organ is found large in authors and orators who excel in concentration of thought; and also in actors and singers, who have the power of exercising several faculties simultaneously, so as to produce, by their combination, one harmonious and united effect; and it is probable that it is by the exercise of a similar power, that animals, such as the chamois, who are fond of heights, are enabled to maintain in action all those faculties which are necessary to preserve their position while they browse in difficult or dangerous situations, and at the same time avoid the aim of the hunter. There appears, therefore, to be nothing in the limited observations of Dr Gall, inconsistent with the more extensive views now taken of the functions of this faculty. Dr Gall stated the organ of Inhabitiveness as conjectural.

IV. Adhesiveness.—The function of this faculty is to produce friendly attachment in general; and it is stronger in women than in men. In children, it is generally shewn by attachment to animals; as dogs, rabbits, birds, or horses. It is one of the main sources of friendship and society in general. It is marked as only probable in Dr Spurzheim's works, published several years ago, but is now established.

V. Combativeness.—This faculty gives a general propensity to contend, resist, or attack, without determining the modes or objects. When the organ is large and active,

delight may be felt even in fighting. The organ is situate at the inferior posterior angle of the parietal bone. It may be manifested in argument as well as in war. It incites us to overcome opposition, and to encounter obstacles of every kind. In all cases of difficulty and danger, where a severe struggle is necessary to command success, this power is of eminent use, and nothing will compensate for the want of it as an active principle. It is generally large in persons who have murdered, not from premeditated purpose, but from the impulse of the moment. Established.

VI. Destructiveness.—The special faculty of this organ seems to be the propensity to destroy in general. When it is energetic, it adds force to the whole character. It furnishes the threat of unpleasant consequences in case of disobedience, which gives weight to command. If it is found in combination with a full development of the higher faculties and sentiments, it materially aids in the production of a character fitted for great achievements. It does not necessarily lead to cruelty; on the contrary, when benevolence and the higher sentiments are strong, it may be employed, with full effect, to promote, by the exercise of a just severity, the purposes of virtue. It leads to crime only when too energetic, and when the sentiments which should counteract it are not sufficiently powerful. The organ is conspicuous in the heads of cool and deliberate murderers, and persons habitually delighting in acts of cruelty, who are also generally found to be deficient in the higher sentiments. This faculty, and the preceding, give the tendency to rage. Established.

VII. Constructiveness.—The name of this organ implies that it gives the special faculty to build or to construct in general, but does not determine the object to be con-

structed. Where the organ is large, with a head in other respects poorly developed, we often see the most beautiful workmanship, and the labours of months or years thrown away on complicated structures, totally inapplicable to any useful purpose. The effects are very different where the rest of the head is well organised. The organ is indispensable in all mechanical professions, from the engineer to the lowest artificer. Birds that build, and also several animals, as the beaver, field-mouse, &c. have it large. Established.

VIII. Acquisitiveness. — This faculty produces the tendency to acquire and to possess in general, without reference to the uses to which the objects, when attained, may be applied. It takes its direction from the other faculties, and hence may lead to collecting coins, paintings, minerals, and other objects of curiosity or science, as well as money. Idiots, under its influence, are known to collect articles of no intrinsic value. When the propensity becomes too energetic, it produces avarice; and even a moderate proportion of it, when it is not regulated by some of the higher sentiments, as conscientiousness, love of approbation, or fear, may produce theft. Established.

IX. Secretiveness.—Man and animals are occasionally liable to the assaults of enemies, which may be avoided by concealment, in cases where strength is wanting to repel them by force. Nature, therefore, has implanted in both, an instinctive tendency to conceal, which, according to its degree of intensity, and to the direction which it receives from the other faculties, may produce prudence, slyness, or cunning. In man, it serves an important purpose. Various thoughts, desires, and emotions, arise involuntarily in the mind, the outward expression of which requires to be regulated by judgment. Secretiveness produces the in-

stinctive tendency to conceal and suppress these emotions, and hence it acts as a restraint on the manifestation of the feelings, till the understanding shall have decided on their propriety, and probable consequences. A certain portion of it is indispensable to the formation of a prudent character. Those in whom it is deficient, are too open for the general intercourse of society. It becomes dangerous and hurtful only when abused; and then it may give rise to lying, duplicity, and deceit, and it supplies the cunning necessary to theft. It is much assisted by Cautiousness, and its influence, when excessive, is most directly counteracted by Love of Approbation. This organ has been found large in actors, and in those who excel in the imitative arts. Combined with Imitation, it appears to give the power of *expression;* and, in actors, it may be conceived to do this, by furnishing its possessor with the power of practising a conscious duplicity, a talent necessarily implied in the representation of a variety of characters. This power of *personation*, is one of the ingredients in a talent for profound dissimulation and hypocrisy. When joined with a full endowment of the sentiment of the ludicrous, it produces *humour*, at least that kind of humour which consists in saying or doing ludicrous things in a grave, unconscious sort of way, as if we were quite insensible to their ludicrous tendency. Thus the man of humour will utter the most absurd, the most laughable, or the most atrocious things, with the appearance of perfect simplicity, and maintaining the most imperturbable gravity, while every one else is convulsed with laughter. In writing, it leads to the use of irony, which is a species of humour. This power is also necessary to success in story-telling, and in the writing of fictitious narrative, as it enables the narrator to conceal his ultimate design or plot under some cover, until he can develope it to his auditors or readers with the greatest effect. It is re-

quisite, in addition to self-esteem and the moral sentiments, to constitute dignity of character; and it serves as a defence against impertinence, or prying curiosity. It gives a sidelong glance, and watchful look, to the eye. Established.

X. Self-Esteem.—The general tendency of this faculty is to make us think highly of ourselves. This tendency appears very different in different persons, and is by no means possessed uniformly in proportion to the merit of the individual. The sentiment manifests itself in different manners according to the peculiar combination of the other faculties with which it is conjoined; and, in general, it leads to esteem of the special propensities and sentiments which characterize the mind of the individual in whom it is powerful. Hence, if the superior sentiments and intellectual faculties are largely developed, it contributes to true dignity and greatness of mind; and the individual esteems himself for those qualities which are really worthy of the esteem of others,—intellectual and moral excellence.

> "Oft-times nothing profits more
> "Than Self-esteem, grounded on just and right
> "Well managed." Milton, *Parad. Lost.*

Dr Gall at first considered this faculty as connected with the desire of physical height, from a certain sentiment of elevation which it communicates; but its functions are now ascertained to be those above stated. It leads to pride, arrogance, and disdain, only when possessed in an excessive degree, and when not controlled by higher sentiments. It corresponds, in some measure, to the Desire of Power of the Metaphysicians. When very large, the individual walks generally in an erect posture; and, by his reserved and authoritative manner, induces the impression in others, that he considers himself as infinitely elevated above his fellow men.

This faculty, joined with a large Acquisitiveness, and not regulated by other sentiments, produces "Selfishness" in the general acceptation of this term. Veneration stands most directly opposed to it; and Combativeness and Firmness aid it. Established.

XI. Love of Approbation.—This faculty renders us attentive to the opinions which others entertain of us; and, according to the degree in which it is possessed, and the manner in which it is directed, produces the love of praise, or of fame, and also emulation, ambition, or vanity. When the organ is small, indifference to the opinions of others is the consequence. As the last mentioned sentiment respects the opinion we entertain of ourselves, so this has regard to the opinion which is entertained of us by others; and, keeping in view this essential difference, almost all that we have said of the former sentiment may be applied to this. The manifestations of this, as well as of the former faculty, are modified by the other faculties with which it is combined.

XII. Cautiousness.—The emotion of fear is familiar to mankind in general; and yet many celebrated metaphysicians do not treat of it as a primitive feeling. It is admitted as such in Phrenology, in consequence of numerous observations. The faculty produces doubts, hesitations, caution, circumspection, or timidity and fear, according to the degree in which it is possessed, and the other faculties with which it is combined. It is an essential ingredient in a prudent character. When Combativeness is not large, and Cautiousness, Conscientiousness, and Love of Approbation are large, the combination gives rise to bashfulness, or *mauvaise honte;* and many years of the most intimate acquaintance with the world, will often not suffice to remove the embarrassment thus occasioned. Many of the lower

animals are remarkable for cautiousness, as the crane and the rook, and they have the corresponding portion of the brain largely developed.

XIII. Benevolence.—It has long been a subject of debate among philosophers, whether Man is entirely selfish in all his actions, or if there is in the mind any sentiment determining him to desire the good of others as a direct object, without reference to any expectation of advantage to himself. The Phrenologists have discovered, that the desire for the happiness of others, bears a proportion to the size of a particular portion of the brain; and hence they conclude, that Benevolence is a primitive sentiment of the mind, independent of all selfish considerations. The faculty disposes to active benevolence and compassion. It also gives mildness and cheerfulness to the temper, and a charitable mode of judging of the actions and characters of others. When abused, it leads to profusion. A small development of the organ does not necessarily produce cruelty. It only leads to indifference about the welfare of others. When Benevolence is strong and Destructiveness weak in the same individual, he is apt to be too facile in his dispositions. When both are vigorous, Destructiveness gives fire and energy to the mind, and Benevolence modifies and controls its improper manifestations.

XIV. Veneration.—The sentiment of Admiration has long been recognized by writers on the mind; but, in this feeling, a certain degree of wonder is implied; and it is not limited to pure and respectful reverence. The latter emotion is the result of the faculty now in question. It inspires with the sentiment of respect; and, when directed to the Supreme Being, leads to adoration. It predisposes to religious feeling, without determining the manner in which it

is directed. It leads also to reverence of ancestry and of superiors in society. It is a distinguishing characteristic in the love of children towards parents. When the organ is large, and that of Self-esteem small, it gives the tendency to humility. Established.

XV. Hope.—The function of this faculty is to produce the sentiment of hope in general. It renders the prospect of the future fair and smiling, and gives the tendency to believe and expect. In religion, the faculty, when powerful, cherishes faith. It produces also, a sanguine disposition; and, when not well directed, it disposes to credulity and extravagant expectation. Established. 17

XVI. Ideality.—This faculty produces the sentiment of the sublime and beautiful; the feeling of exquisiteness, and the desire to invest every object with more than sublunary perfection. It inspires with rapture and enthusiasm, and prompts to embellishment. When joined with Cautiousness and Veneration large, it tends towards the serious and sublime; when combined with Hope and Wit large, and Cautiousness small, it disposes rather to gaiety and brilliancy. It is an essential requisite in the poet, orator, and artist. Without it, the productions of the mind may be solid, useful and becoming; but they must ever be deficient in grandeur of conception, and splendour of execution, and they will want the glow of fancy which enlivens and adorns every object presented to its touch. Established. 20

Wonder.—Immediately above Ideality, a blank space appears in the cast and plates of the head: the function of this part of the brain was not ascertained when the other organs were numbered, but subsequent observations shew that it is connected with the sentiment of Wonder. Per- 18

sons in whom this organ is large, are fond of novelty, and susceptible of vivid emotions of surprise. They delight in the marvellous, and are prone to entertain romantic views. When very powerful, it gives to the eyes and eye-brows an elevated cast, indicating a permanent expression of surprise. The faculty produces delight in stories of ghosts and supernatural agency. The organ is not numbered, to avoid, in the present state of the science, an alteration of the numeration of the subsequent organs. Probable.

16 XVII. Conscientiousness.—Observation, by shewing that those who experience the sentiment of justice very powerfully, have a certain portion of the brain largely developed, while those in whom it is weak, have this portion small, has for ever settled the dispute among metaphysicians, whether or not there is in man a governing principle of moral rectitude and justice. This faculty produces a great effect upon the manifestations of the other powers. "Other principles of action may have more strength, but "this only has authority. Its sentence makes us guilty to "ourselves, and guilty in the eyes of our Maker, whatever "other principle may be set in opposition to it. It is evi- "dent, therefore, that this principle has,' from its nature, "an authority to direct and determine with regard to our "conduct; to judge, to acquit, or to condemn, and even to "punish,—an authority which belongs to no other prin- "ciple of the human mind."—(Reid, Essay III. ch. viii.) Bishop Butler gives an illustration of the sentiment similar to this. This faculty is the fountain of all human laws. The organ is considered as ascertained.

15 XVIII.—Firmness.—The special faculty of this organ is somewhat difficult of discrimination; but it seems to be perseverance, decisiveness, or firmness,—the object or pur-

pose to be persevered in being determined by other faculties. This faculty, when not directed by the superior sentiments, leads to obstinacy and infatuation. When small, want of steadiness and determination is the result. When very large, it gives a peculiar erectness and stiffness to the gait. Established.

XIX. Individuality.—This faculty gives the desire to know facts and things, without determining the kind of knowledge, and without any view to the purposes to which it may be subservient. It produces a talent for observation, and a capacity for details. Many persons are to be met with, who are learned but not profound, who know something of almost all arts and sciences, and who are never at a loss to speak on any subject. Such persons generally have this organ large. When conjoined with ambition, and moderate confidence in one's own opinion, it conduces to that readiness of display which often passes for superior ability. When combined with comparison, and the faculty of remembering names, it gives the talent necessary to botany, mineralogy, and natural history in general. It is established.

There are strong grounds for believing that two organs
12 are included in Number 19. The lower portion of it, including a small space betwixt the organs of Locality, appears to be connected with the talent for knowing and remember-
30 ing facts and occurrences. The upper portion, bordering on Comparison, is large in persons who are fond of natural history, and who appear to delight in the study of objects which exist. The frontal sinus is occasionally found under the lower space marked 19.

23 XX. Form.—The size of this organ is indicated by the width between the eyes, the different degrees of which cor-

respond to the greater or less development of the portions of brain situate on the mesial or inner side of the orbitary plates of the frontal bone. The function of the faculty is to judge of form. It aids the portrait-painter, and all persons engaged in the imitative arts. It gives the power of distinguishing faces. The organ appears to have been large in King George III., who was noted for his recollection of individuals. Children in whom it is large, are frequently observed, for their amusement, drawing, cutting, or scratching the figures of men and animals. Established.

24 XXI. Size.—Persons are found who have an intuitive facility in estimating Size, and in whom the powers of distinguishing form and relative position are not equally strong; and the part of the brain under No. 21. has been observed in such individuals to be large. It gives the power of perceiving and judging of perspective. Some officers in the army, in forming their companies into line, estimate the space which the men will occupy with perfect accuracy, and others can never learn to judge correctly of this requisite, and the organ has been observed largely developed in the former. Locality also may conduce to this talent. Probable.

XXII.—Weight or Resistance.—There seems to be no analogy between the weight or resistance of bodies, and their other qualities. They may be of all forms, sizes, and colours, liquid or solid, and yet none of these features would necessarily imply that one was heavier than the other. This quality, therefore, being distinct from all others, we cannot logically refer the cognizance of it to any of the faculties of the Mind which judge of the other attributes of matter; and, as the mental power undoubtedly exists, there is reason to conjecture that it may be manifested by means of a

special organ. Persons who excel at archery and quoits, also those who find great facility in judging of momentum and resistance in mechanics, are observed to possess the parts of the brain lying near the organ of size largely developed, and hence it is conjectured that the organ of weight is situate in that direction. The organ, however, is not ascertained; and it is not marked on the bust.

26 XXIII. Colouring.—Several of the Metaphysicians were aware, that a person may have very acute vision, and yet be destitute of the power of distinguishing colours; but habit and attention have as usual been adduced to solve the difficulty. Observation shews that those who have great natural power of perceiving colours, have a large development of that portion of the brain situate under the middle of the arch of the eye-brows, enclosed by the lines 23., whilst those who cannot distinguish minute shades of colour have this portion small. The faculty of this organ is to perceive colours, and their shades, but it does not give what is called Taste in their arrangement. The organ is now considered to be established.

27 XXIV. Locality or Space.—The special faculty of this organ seems to be, to give the desire of seeing, and the power of remembering localities and scenery of every description: the inclination to travel is a consequence of its activity, and it is large in the expert landscape-painter. The organ exists in animals; and, becoming active at certain seasons, is supposed to prompt them to migrate. It is large in the woodcock and swallow. It has been alleged that the existence of the frontal sinus (a separation between the inner and outer tables of the skull, occurring in some individuals) renders it impossible to determine the size of this organ in the living subject. The Phrenologists, how-

ever, affirm, as the result of numerous dissections, that the sinus rarely rises so high as this organ, except in old age and disease. This faculty, with Individuality, Size, and Comparison, appears, from observations, to be essential constituents in a genius for geometry. Where these are small, this science excites little interest, and is learned with extreme difficulty. The organ is established.

24 XXV. Order.—Many people are remarkable for the attention they pay to the arrangement of their domestic concerns, for the order in which furniture, books, clothes, &c. are kept: they are distressed to see any thing out of its place, and are acutely sensible to all the comforts of arrangement and order. Others, again, present the very opposite appearances, and are lost to all the advantages which arrangement bestows. In the first, the organ marked 25. will be found large, in the second small. Dr Spurzheim has marked it as only probable: on account of its small size, it is often difficult to observe it correctly, but it may now be considered as established.

27 XXVI. Time.—The power of conceiving time, and of remembering circumstances connected by no link, but the relation in which they stand to each other in chronology, is very different in different individuals. We have a few observations in evidence of this faculty, but these are not sufficiently numerous to allow us to speak positively. The organ is marked 26. on the bust, and the special faculty seems to be the power of recollecting dates, of judging of time, and of intervals in general; but the organ is only probable.

28 XXVII. Number.—Many examples of mental calculators must be known to every one. Mr G. Bidder per-

forms the most complicated arithmetical problems, with a celerity and accuracy equally astonishing. The organ which gives this power is situate under 27. on the bust, and its special faculty is calculation in general. In Mr B. it is very large. Established.

32 XXVIII. TUNE.—The organ of tune bears the same relation to the ears as that of colour does to the eyes. We have seen that the eye may be very acute, yet the power of discriminating shades of colour be defective. In like manner, the auditory apparatus may be in the most perfect state, and yet the power of perceiving melody and of recollecting tunes, be not at all in proportion. When the organ is fully developed, it enlarges the lateral parts of the forehead. It is found of large size in all great composers of music, as HANDEL, HAYDN, ROSSINI, and in all who have flourished as eminent performers. Established.

33 XXIX. LANGUAGE.—The special faculty of this organ is to enable us to acquire a knowledge of, and to give us the power of using artificial signs or words. A low degree of the organ may enable a person, by great efforts, to learn languages, but a full development is indispensible to copiousness and fluency of style in speech or writing. The signification of words is learned by other faculties: For example, this faculty may enable us to learn and remember the word Melody, but if we do not possess the faculty of Tune, we can never appreciate the real meaning attached to that word by those who possess that faculty in a high degree. The organ, which is indicated by prominence of the eyes, will be found large in philologists, orators and botanists. The prominence of the eyes is produced by the large development of the part of the brain resting

upon the upper orbitary plate, and pressing it downwards. The organ is established.

32 XXX. Comparison.—Dr Gall observed various persons, who, in order to convince others, had recourse to similies, examples, and analogies, and but seldom to philosophic reasoning. In these he found, in the situation of 30. on the bust, an elevation presenting the appearance of an inverted pyramid. This faculty prompts us to comparison, without determining its kind; for every one must draw his analogies, and choose his similies, from his own knowledge, and from the sphere of activity of his other faculties. The activity of the faculty is very important; and people who have it large, are generally said to have much discrimination. Individuality, Language, and Comparison combined, give readiness of apprehension, and fluency of speech; but unless Causality be also great, the reasonings are not consecutive, and the views not comprehensive. It is generally large in the heads of good artists, and in popular preachers, who illustrate their subject by similitudes, examples, and parables. By suggesting comparisons, it greatly aids wit. Established.

35 XXXI. Causality.—Individuality and Comparison take cognizance of every thing that is obvious to the senses. This faculty looks a little farther than mere sense, and takes cognizance of the relations and dependencies of phenomena. It furnishes the idea of causation, as implying something more than mere juxta-position or sequence,—and as forming an invisible bond of connection between cause and effect. It impresses us with an irresistible conviction, that every phenomenon or change in nature is caused by something, and hence, by successive steps, leads us to the first cause of all. In looking at the actions of men, it leads us to consider the

motives or moving causes from which they proceed. It induces us, on all occasions, to ask, Why and wherefore is this so? It corresponds nearly to the "Relative Suggestion" of Dr Brown,—or the "Reasoning Power" of Locke, and other writers. It gives deep penetration, and the perception of logical consequence in argument. It is large in persons who possess a natural genius for metaphysics, political economy, or similar sciences. Established.

XXXII. Wit, or the Sentiment of the Ludicrous.—This faculty is treated as an intellectual power in Dr Spurzheim's English work; but, in his French works, subsequently printed, it is considered as a sentiment, and the change appears appropriate. It gives a feeling of the ludicrous, and produces the tendency to represent objects under this aspect, in the same way as Ideality gives a feeling of the beautiful, and also the tendency to elevate and adorn all the conceptions of the mind. Wit, in the common acceptation of the word, consists in conceptions formed by the higher intellectual powers imbued with the sentiment in question. Humour consists in the manifestation or representation of the propensities or sentiments, under the colouring of wit, and to produce humour in representation Secretiveness and Imitation are also requisite. Persons who have been remarkable for the wit and point of their writings, as Sterne, Voltaire, Piron, &c. have had the lateral parts of the forehead in the situation of 32. on the bust much developed; and the same configuration of head will be found in all living characters distinguished for the same talent. It is greatly assisted by comparison, but rather impeded in its manifestations by causality; the latter faculty producing the tendency to logical relation in the thoughts, the reverse of the combinations of wit. Established.

XXXIII. Imitation.—Dr Gall received the first hint of the existence of the organ marked 33. on the bust, from examining the head of one of his friends, who possessed the power of imitating in a surprising degree, and was indeed a perfect actor. He found the same configuration of head in an individual in the Deaf and Dumb Institution, who, the first time he put on a mask at the carnival, imitated perfectly well all the persons who frequented the Institution. Observation afterwards multiplied examples to such an amount, that it was speedily considered as established. Persons who have the organ large, when they mention a fact or relate an anecdote, imitate the voice, look, and gesture of those they are describing, so that by its mimicry it is easily recognized. Players require the organ, and many painters have derived no inconsiderable share of their fame from possessing it largely developed. It greatly assists constructiveness and form. Established.

GENERAL OBSERVATIONS.

We have already stated, that the science of Phrenology rests on facts. By observation, then,—by comparing manifestation with development,—the phrenologists have pointed out certain primitive faculties of the mind, and have shewn the effect which both the absolute and relative size of the organs has upon the power of manifesting them. In the case of most of the faculties, the observations have been so numerous, that they hold their conclusions as certain, and we have accordingly marked these Established. In regard to a few, where the observations have been more limited, the conclusions are stated as probable; and, in one or two,

where reasonable evidence is wanting, they are mentioned as only conjectural.

Every one who merely takes an index to the organs in one hand, and a plate or cast of the head in the other, is not thereby at once qualified to decide definitively on the merits of the system; both patience and practice are necessary to enable us to become acquainted with the appearance of the development, and considerable experience, and no small degree of reflecting power, is requisite to enable us to judge correctly of the effects of the combinations of the different organs, and of the consequent character.

If we have ascertained that the system is founded in nature, we are safe to conclude that the knowledge of it cannot lead to harm. This is the proper answer to those persons who allege that it teaches fatalism and materialism, unless it can be shewn that the knowledge of truth necessarily leads to evil. No inquiry is made into the nature, essence, or substance of the mind or soul itself. Phrenology teaches a knowledge of the works of the Creator; and, as his works are wisely and perfectly made, the legitimate presumption is, that those who see danger in a knowledge of them, are mistaken in their views. Every objection that the system is dangerous, pre-supposes its connection with error. The answer to such an objection, therefore, is the demonstration of its truth. If it were false, human ingenuity might certainly discover and point out the evil consequences to which it would lead; but, if it be true, no human intelligence is entitled to condemn it. On its truth, therefore, its supporters take their stand.

Throughout the preceding pages, we have spoken of the organs in the singular number, but this was only for the sake of perspicuity. All the organs are double,—as we have two eyes, two ears, so we have two organs of tune, of wit, of benevolence, firmness, self-esteem; but in these three

last, and in the others that are situate along the middle line of the head, the two hemispheres of the brain approach so closely, that both the organs are included in one circle, and always spoken of as single; thus we say, the organ of comparison, of benevolence, of veneration, &c.; but there are still two organs, one on each side. Every individual has all the organs, but their size and degree of activity vary in all. *Strength* is one quality of mind, and *activity* another. A mind may be very powerful, but slow; or very active, but not remarkable for vigour; or both qualities may be combined. Strength depends on the *size* of the organs; activity may result from constitution and exercise. Hence Phrenology affords a measure of the strength alone. It indicates whether a man is by nature fitted to think or feel strongly or feebly; but does not reveal the number of thoughts or feelings which may pass through his mind in a given time, nor the degree in which his faculties have been cultivated. There are several portions of the brain, particularly at the base, the development of which cannot be ascertained during life. The functions of these parts remain to be discovered.

If one organ be large, and the neighbouring organs small, an elevation of the skull is perceptible at the places where the large organs are situate. If a number of contiguous organs be large, no particular elevation will be perceptible; but there will be a general *fulness* of the corresponding part of the head. Thus, if the organ of individuality alone be large, there will be a prominence in the middle of the forehead, as in children; but if the organs of all the knowing and reflecting faculties be large, there will be a general fulness of the forehead.

All the faculties, when active in a due degree, produce actions good—proper—or necessary. It is excess of activity which produces abuses; and it is probable that the

science of Phrenology has only been discovered, in consequence of some individuals, in whom particular organs were very largely developed, yielding to the strongest propensities of their nature. The smallness of a particular organ is not the cause of a faculty producing abuses: thus, though the faculty of benevolence be but weakly manifested, from the organ being small, this does not produce cruelty; it is only accompanied with indifference to the miseries and sufferings of others. When one faculty is weak, abuses may result by another being left without proper restraint. Thus active faculties of acquisitiveness and secretiveness, combined with a weak faculty of conscientiousness, and weak reflecting faculties, may produce theft. Powerful faculties of combativeness and destructiveness, with a weak faculty of benevolence, may produce cruel and ferocious actions. A strong faculty of benevolence, with a weak faculty of cautiousness, and weak reflecting faculties, may produce prodigality, and expose a person to be the prey of knaves.

Every faculty may be active of itself, in consequence of internal activity of the organ, or it may be excited by external means. Hence arise natural propensities to particular courses of action, and also the susceptibility of improvement by education.

Every faculty being active, gives a desire of gratification, by engaging in actions correspondent to its nature. Thus the faculty of tune leads to the desire of producing music. The faculty of benevolence prompts to acts of charity. Hence the foundation of particular tastes. Whatever is suited to gratify the natural desires of the faculties which are most active in any individual, is that which pleases him most, or is most suited to his taste.

The combination of the different faculties, and their relative activity, determine the particular characters of indi-

viduals. Thus, powerful faculties of firmness, conscientiousness, and cautiousness, produce sedate, serious, and prudent characters. Powerful faculties of hope, ideality, and love of approbation, with weak faculties of cautiousness, and weak reflecting faculties, produce gay, inconsiderate characters. Self-esteem, firmness, and little love of approbation, conscientiousness, and veneration, produce obstinate characters. Love of approbation, and benevolence, will give an obliging and attentive disposition.

I.—*A View of some of Dr Spurzheim's Lectures, as delivered at Edinburgh, in the Winter of* 1816.

By Dr Poole.

(Read May 1. 1823.*)*

Gentlemen, — In soliciting your attention, even at this distance of time, to the subject of Dr Spurzheim's Lectures, I feel myself under no necessity to apologize for intrusion; and, I am not ashamed to confess, I entertain the hope of experiencing something more satisfactory than your compassionate forbearance. The avowal of your belief in the substantial truth of the science of Phrenology, conveyed in the very fact of your being members of this Society, is ample warrant, for any individual of your number, respectfully to offer to your notice such matter and communications as have proved efficacious in enlightening and confirming his own mind, in regard to the system, or seem to him in any degree calculated to promote among others an interest in its cultivation and advancement. It is an expression of zeal, however feeble or unimportant its results, which indicates good intention at least, and therefore cannot fail of a patient reception on the part of those whose

benefit, either by instruction or example, is professedly consulted. But, on the present occasion, I am not content to claim merely this common and incontestible privilege. You would justly censure me if I did. In the very attempt to preserve a memorial of one of the founders of our science, considered in the character of a public teacher,—to describe him as I well remember he was listened to and admired,—and, still more, to exhibit, with candour and fidelity, an outline of those doctrines, in the placid but fearless maintenance of which, he at once silenced the ignorant, disarmed opposition of its malignity, and carried conviction to the unprejudiced,—I cannot for a moment hesitate to assure myself of an approbation which has gratitude rather than politeness for its origin. I say so, unblushingly, because I am aware that the honour is fitting so humble an individual, no otherwise than from having enjoyed the felicity of being one of Dr SPURZHEIM's auditors, and feeling it impossible to resist the evidence of his singular deserts, or to close my eyes to the importance and verisimilitude of those facts and principles for which he so ably contended.

I have only to add, in the way of preface, that the Lectures of which I propose to give a view, were delivered in the Hall where the meetings of our Society are now held; that a numerous company, among whom were several ladies, repeatedly testified their satisfaction at the ingenious, spirited, and eloquent manner in which Dr SPURZHEIM explained and defended the object of his labours; that part of the summary which I have now the honour to read, was communicated at the time, and by desire, to one of the Journals of this city; and that, as the Lectures themselves contained the principles of the science which we are pledged to cultivate, it is probable that my remarks on them may be found of some use as an introduction to phrenological discussions.

Dr Spurzheim commenced by apologizing for his faulty pronunciation, and imperfect knowledge of the language in which he was about to deliver himself, and expressing his trust in the indulgent consideration of his hearers. But there seemed to be fewer demands on their favour or patience than he gave reasons for applauding him. Without the aid of notes, which a thorough acquaintance with his subject, and the habit of public speaking, had rendered unnecessary, he never failed to express himself in clear and forcible terms, free from embarrassment or affectation, and with the happy, but unassuming firmness of a man who believed that the importance and the truth of his discoveries and observations formed a sufficient claim to attentive regard, and would redeem those trivial and adventitious errors which he might happen to commit in declaring them. His illustrations were copious and striking, the product of a mind matured in useful learning; but still more indebted to the long and varied exercise of native discernment on the concerns and characters of mankind. This gave peculiar value to his remarks, in the judgments of persons who had learned to distrust the theories of the schools, and to wait, with some degree of patience, till an enlarged and well-arranged series of facts should warrant a degree of confidence in the opinions which he delivered. It may cost the admirers of certain established systems some sacrifice of feeling and pride, to admit the relevancy of the observations on which the new doctrines are founded; nor is it possible to think that the writings of those eminent men who have given celebrity to metaphysical science, in modern times, are far from elucidating the nature of our species, without lamenting the inutility, if not positive mischief, of so much ingenious and elegant labour; but he who aspires to the character of a philosopher must prepare himself to abandon prejudices, and to submit to the exclusive authority of demonstrable truth.

Dr Spurzheim, duly sensible of the truth of these remarks, and convinced, as he seemed to be, of the solidity of his views, and the weakness of the common arguments by which they had been impugned, cautioned his hearers against every kind of intellectual interference with the right and necessity of private judgment on those facts which he should adduce. His good sense, as might be expected, prompted him to extend a similar interdict to the possible influence which he himself might unintentionally produce on some minds, and which indeed those who had the pleasure of his acquaintance, or had derived instruction from his multifarious and interesting intelligence, might be thought not at all unlikely to experience. "Do not," said he, "believe any thing because I affirm it, nor, on the other hand, object to it merely because others have done so before. I may err, and others may err, but Nature is always true and constant. See and judge of her for yourselves." In the same spirit, and with the same propriety, he distinguished between the facts which he meant to bring forward, as at all events deserving to be held important in the study of the human character and constitution, and those inferences which he or others had drawn from them. The former, he affirmed, *must* be admitted, and accordingly, in regard to them, both he and his hearers were bound to identity of belief. But, with respect to the latter, especially in the present infancy of the science, some difference of sentiment might reasonably be anticipated, and certainly ought to be regarded without the admixture of angry passion, or a disposition to unprofitable cavilling.

Reflections to this effect, followed by some observations on the advantages of knowledge of every kind, and the particular importance of the science of mind, brought him to the statement of the nature and object of his Lectures. In the following remarks, by which I endeavour to record my

own impression of these, I purpose, for convenience sake, generally to speak in the present tense; and I have only this farther to mention as preliminary, that altogether, his course furnished a rich intellectual treat, and seemed to produce the fullest conviction, that the establishment of a science, difficult, because complicated, and because it concerned the least known parts of nature, and hazardous, because opposed to established opinion, could not have been entrusted to more skilful hands; and that, whatever might become of the doctrine, it was morally impossible, I should think, for any one who heard its advocate, to entertain a doubt of his sincerity, or to call in question either the acuteness or the soundness of his talents.

The object of the science is not what it has often been asserted to be. No investigation into the *nature* of mind is even so much as attempted in it. We know no more of mind, as it is in itself, than we know of matter; and, accordingly, we must content ourselves with observations on the properties of the one, and the manifestations of the other, as presented through the medium of our bodily organs. No argument, it is evident, is thence to be drawn as to the materiality of the mind. Such a question is never once agitated in the system; far less does the system afford any thing like an approach to the affirmative, as has sometimes, most erroneously, been imagined. The doctrine, it is acknowledged, may be abused; but, in this respect, it does not differ from any other science, nor from any of the gifts of nature, all of which may be, and most of which have been productive of evil, through the depravity or the weakness of mankind. This may be particularly instanced in the professions of medicine and law, and in the religious feeling or propensity, which, however natural to our species, has often been perverted to persecution and the most disgraceful absurdities.

The object of the system, then, is the manifestations of the human mind, as dependent on, or connected with, organization. This dependence is assumed as essential, not to the existence, but to the manifestation of the mind, for we have no example of the operations or agency of the one, without the instrumentality of the other. Admitting, therefore, the constancy of this conjunction, it may be shewn, that the peculiarities of the organization are related to peculiarities of mind; and hence the system furnishes a foundation for what is commonly denominated Physiognomy. But the physiognomy to which it gives rise will be found to differ very widely from that of any previous philosophers. Here Dr SPURZHEIM thought it necessary to explain away the notion which had been entertained respecting the system, namely, that it undertook, from the organization, to conclude as to the actions of mankind. Nothing can be farther from the truth; and it is really strange, that those who have ventured to ascribe to it such absurd presumption, should never have been at the pains to consider the very first passage of Dr SPURZHEIM's printed work, in which it is expressly disclaimed. The utmost that is inferred is the existence and the constitutional predominance of those internal principles which lead to actions, whether of a moral or an intellectual nature.

The opinion, that the organization is intimately and invariably connected with the condition and character of mind, may be proved to be of older date than the present times. One singular evidence of this we have in the strange assertion of some of the ancients, that the mind created its habitation, and that this is in exact proportion to its own excellency. Hence the whimsical fancy that a deformed or defective mind had an ugly body, and *vice versa*. In modern times, similar sentiments have occasionally been entertained. LAVATER, for example, sought for indications

of character in the form of the features, conceiving that an aquiline nose, to take one instance, implied wit. Such observations, it is almost needless to say, are quite empirical, and, in fact, so discordant and fanciful as to yield no satisfaction to a philosophical inquirer. It cannot be necessary to multiply examples of erroneous methods of procedure, in the study of human nature, as the common reading of most persons furnishes ample proof of lamentable failures. But one allusion made by Dr SPURZHEIM, was too remarkable to be passed over, and ought to be mentioned as strikingly illustrative of the radical discrepancy between the foundations of this science, and the metaphysical systems both of past and present times. For the due cultivation of the philosophy of the human mind, it is requisite, according to one of the most popular, and certainly the most elegant advocate for the latter, now living, to retire to one's closet, and to attend exclusively and unremittingly to the objects of one's own consciousness. But, in reality, a thousand years may be spent in such a process, without a single advance or discovery being made, which ought to entitle the votary to commendation. The mind of man must be studied in company, amid the pursuits, the business, and the difficulties of life. It is true, the results of this more extensive inquiry may be less flattering, either to the individual inquirer, or to the species at large; but their superior importance will amply compensate for the loss of that splendour, in which the visionary recluse may contrive to array his creations. Nor are the difficulties so trifling, as to render success unworthy the exertions and ambition of the greatest genius. On the contrary, they are quite in proportion to the abstract and complicated nature of the subject to be investigated, and necessarily demand the exercise of cautious observation, and the full efficacy of inductive logic.

An important question now presents itself for discussion. What part of the animal frame is allotted as the organ of the mind, that by which it manifests itself, or operates on the rest of the system? Various considerations, and what we may call the method of exhaustion, besides the concurrent testimony of most philosophers, direct our attention to the brain, that mass of curiously wrought and singularly diversified matter, which occupies the interior of the bones of the skull.

The first proposition to be stated in respect to this organ, is, that without it no manifestation of mind has ever yet been known. Such, at least, is the decisive and unequivocal result of all our inquiries. The few apparent exceptions which medical men have witnessed, are all explicable by a peculiar change which the brain undergoes, in consequence of disease; but it is affirmed universally, that wherever mind is indicated, brain is found, though the converse of the proposition, it is needless to say, does not always hold true.

The second proposition, founded also on observation, is, that a certain quantity of brain is required for the manifestation of mind. In other words, a brain may be too small to admit of the usual manifestations of mind. This is ascertained to be the case in by much the greater number of persons born idiots, provided, it is necessary to mention, there do not exist water in the brain; a disease which often, and more particularly in young subjects, occasions a preternatural enlargement of the head. Dr Spurzheim's remarks on this proposition were peculiarly interesting, and may readily be verified by an examination of the unfortunate creatures who, from infancy, have required the constant care, or mortified the feelings of humanity. Here, it is proper to mention, that in many cases of water in the head, the manifestations of the mind are still carried on, at

least for some time. The most singular one hitherto met with by Dr Spurzheim, was that of a person then living at Musselburgh, whose head was considerably larger than any other in whom the mind had continued to manifest itself.

In the third place, it may be remarked, that, other circumstances being alike, the manifestations of the mind bear a proportion to the size of the brain. But here it is necessary to guard against mistake. The best way of doing so, perhaps, is to state, that size is only *one* of the conditions on which the manifestations depend;—or, in the language of mathematics, it is one of the terms of an equation; and that there are other conditions, all of which require to be known before any special conclusion is warranted. But, universally, it may be affirmed, that men, remarkable for the versatility and general scope of their genius, that is to say, for an aptitude to excel in whatever they engage themselves in, have large brains, and these are so distributed as to give great fulness to the fore and upper parts of the head. This may be instanced in the case of Lord Bacon, with whose cast we are all familiar. But the converse of the proposition, it ought to be carefully remembered, is not maintained. All that is asserted is, that persons displaying universal genius in a high degree, possess large brains, arranged as has been mentioned; but that there may be, and are examples of large brains, where universal genius, or a great and wide range of talents, has not been manifested. It can easily be understood, indeed, that the consistency of the brain—the temperament of the constitution—the degree of exercise of the talents—and other circumstances, are likely to have a certain influence. The ancients, it may be remarked, were at one time extremely attentive to the conformation and size of the head in different characters, as is strikingly displayed in the casts

from some of the remains of their sculpture. That of the Gladiator, for example, varies extremely from that of one of their wise men—and Jupiter from the rest of the gods. The differences quite coincide with the remarks now made. But the ancients were not always equally considerate. We have a striking evidence of this, in a cast from the far famed Venus, which displays a size of head probably never met with, except in the case of a person an idiot from birth, and who will continue so till death. Modern artists will sometimes be found equally good authority; but it must be confessed, that a proper understanding of the connection of the mind with the organization, would materially assist them in doing justice to their subjects. The poets, who are most remarkable for their fidelity to nature, have not been inattentive to the differences now alluded to. SHAKESPEARE, for instance, speaks of "foreheads villa-" nously low,"—and MILTON, describing, on the other hand, our first parent, is careful to notice "his fair large front." The portraits of these two illustrious men, it may be added, are no inadequate evidences of the truth of the proposition contended for.

When it is affirmed that the brain is the Organ of the mind, it is meant that it is *exclusively* so; that no other parts of the system are employed as its instruments, however they may be subject, as they often are, to its influence. Again, when the Manifestations of the mind are spoken of, the expression is not confined to the intellectual faculties only, but comprehends also the whole of the emotions, feelings, propensities, and sentiments—in fact, every thing by which a sentient and intelligent being is distinguished, and which cannot, without absurdity and contradiction to the fundamental laws of philosophising, be considered as the property of matter. In the broad assertion of these opinions, this doctrine differs widely from most, per-

haps from all of its predecessors. That the intellectual faculties were seated, to use the common, but surely very objectionable phrase, in the brain, was a proposition early maintained by philosophers, and for which also, many of the moderns have contended. It is certainly an established topic in popular belief; but those who admitted it, differed extremely as to the precise region of the brain which was entitled to pre-eminence. If it were not too serious a reflection on philosophers, one might be apt to take amusement in the history of their controversies on the subject; and, in reality, so thoroughly have the pretensions of the candidates been demonstrated and disproved by their respective advocates and opponents, that one might be warranted in saying, if he had no other guide, that every part of the brain, and that no part of it, is the seat of the soul, and that it is perfectly endless to make any inquiry about the matter! But, admitting the correctness of any one of these opinions, it is certain that philosophers, almost without exception, conceived the affections, sentiments, and feelings, to have a separate habitation from the intellect. The learned and unlearned appear to have agreed in ascribing these to the viscera, though considerable dissension has existed, at various times, as to their peculiar allotment. Thus the heart, the stomach, the liver, the spleen, and other parts, have all had their respective inmates. Now, either these are very erratically disposed, and change their quarters with the climate, or the whole system of popular belief on the subject is fundamentally erroneous; for the opinions and language of different ages and countries materially differ respecting the distribution and arrangement of those intellectual and moral powers, as might easily be shewn by quotations from the classics, contrasted with modern authors. But it is unnecessary to have recourse to such a mode of reasoning. The common opinion is utterly

untenable, as might easily be proved on other grounds, particularly comparative anatomy and physiology.

There are animals, for example, which display certain passions and propensities, though destitute of the organs, on which, according to this opinion, they are dependent; and, on the other hand, there are animals which possess certain viscera, though they do not display those affections and sentiments with which these are supposed to be endowed. There is no discoverable proportion, in any animals, between the size of their viscera and any of the alleged products. Moreover, animals with similar viscera, have nevertheless very different inclinations and powers; and examples might be mentioned of similar inclinations and powers with different viscera. It is an established principle in physiology, besides, that the viscera have each but one function to perform; and the history of disease testifies the occurrence of great and even fatal derangements in several, if not all of them, without any corresponding diminution or decay of their alleged inmates.

The opinion now contested, is often endeavoured to be maintained in another manner; to which it is necessary to pay some attention, because of its apparent and generally admitted correctness. The heart, it is said, is assuredly the seat of the affections and passions, because we are perfectly sensible of peculiar feelings and motions in it, whenever these affections and passions are excited. And something similar may be affirmed occasionally of other viscera, as the experience of every individual testifies. We have never seen greater justice done to this argument, which, beyond all doubt, has been universally credited, than in the words, somewhat quaint indeed, but abundantly explicit and pointed, of an old but meritorious author, who may be adduced *instar omnium* as a reasoner on the subject. The passage is a choice example of a mode of philosophising, to which many moderns, professing adherence to the highest autho-

rity in matters of science, have not been ashamed to give sanction by the fidelity of their imitation.—" A question " may be demanded, and not easily resolved, Whether the " faculty of our sensitive appetite hath allotted unto it some " peculiar part of the body, where she exercises her proper " functions and operations? for, as we see by experience, " the facultie of seeing, the power of hearing, the sense of " smelling, tasting, and touching, have assigned unto them " divers corporall instruments, habitations, or seats, where- " in they see, heare, smell, tast, and touch; as eyes, eares, " nose, tongue, flesh, and sinews. Now, the question pro- " pounded is thus to bee understood, Whether may there " be determined any part of the bodie, wherein peculiarly " the passions of the mind are effected? To which que- " stion I answere, that the very seate of all passions is the " heart, both of men and beasts; divers reasons move me " to this opinion. First, The very common experience, " men trie daily and hourely in themselves—for who loveth " extremely, and feeleth not that passion to dissolve his " heart?—Who rejoiceth, and proveth not his heart di- " lated?—Who is moved with heaviness, or plunged with " paine, and perceiveth not his heart to be coarcted?— " Whom inflameth ire, and hath not heart-burning? By " these experiences, we prove in our hearts the working of " passions, and by the noise of their tumult, we understand " the worke of their presence. The second reason is, be- " cause, as our sensitive apprehension hath her seat in the " braine (for we all prove that, in understanding, we es- " pecially bend the force of our soule to the former part " thereof) so the affections and passions, in proportionate " manner, must have some corporall organ and instrument, " and what more convenient than the heart? For, as the " brayne fitteth best, for the softnesse and moysture, to re- " ceive the forms and prints of objects for understanding;

" even so the heart, endued with most fiery spirits, fitteth " best for affecting. Lastly, For what other reason, in feare " and anger, become men so pale and wanne, but that the " blood runneth to the heart to succour it *."

Such is the substance of the popular creed, as held forth, with various modifications, in the current language of most countries, and adopted extensively as the basis of the physiology of the passions. How erroneous and inadequate it is, it would not be very difficult to demonstrate.

Our sensations are often very uncertain indications of the causes by which they have been excited, or of the places to which those causes are applied. All the parts of the body are in connection with each other by means of nerves. Hence it is that changes of feeling are propagated throughout the whole. This takes place so rapidly at times, that the sensations themselves, and the perceptions of the properties or qualities of the external substances which have occasioned them, are confounded together in the imagination. In this transmission of feeling, if the phrase may be allowed, there is often no diminution of force; but, on the contrary, it sometimes happens, that a distant part is much more affected than that in which the excitement was first produced. Medical men are well acquainted with instances of this kind, and are in the habit of detecting diseases at considerable distances from those places in which the patients feel most uneasiness. Thus, obstructions in the liver are frequently accompanied with severe pain about the shoulders, although the region of the liver itself is not materially affected; a degree of pain, felt in a certain part of the skin of the belly, so great as to attract the whole of a person's attention, is not unusually the chief symptom of a

* The Passions of the Mind in General, by Thomas Wright, London, 1630.

calculus in the ureter; a very distressing affection of the leg and thigh is the consequence of a similar disease; aching of the limbs is often produced by a disordered state of stomach; indigestion sometimes occasions headache; and the presence of worms in the intestines, causes itching of the nose. The mere circumstance, therefore, of our experiencing certain feelings about the heart or other viscus, is not of itself sufficient proof that the causes are situate there, or that these viscera are their organs. There are still more familiar examples which prove the absurdity of ascribing certain affections and feelings to the parts which are apparently most influenced by them. Sorrow will cause a flood of tears; anger or fear will make the knees tremble; a sense of shame occasions a redness of the cheeks; the recollection of an injury quickens the motion of the blood. But who ever thinks that the lachrymal gland is the seat of sorrow,—that anger and fear reside in the knees,—that the cheeks are the organ of shame,—or that the memory is any way concerned in the circulation? Every person must be aware of the fact, that in all these, and many other cases, the mind is first affected; and hence it can readily be believed, that the parts which are ultimately brought into action, are so through the medium of its organ, although the precise mode in which the effects follow the causes may never be perfectly understood. If the least doubt remain on the subject, it may perhaps be removed by a single remark or two, calculated to direct attention to the circumstance of the previous emotion of the mind.

If a man be brought suddenly and unexpectedly to the brink of a precipice, a degree of fear sufficient to make him tremble instantaneously seizes him. But a person who is blind, and has not otherwise been apprised of his danger, would probably go on without the least uneasiness; the most pathetic story told to the deaf excites no emotion in

his mind; and the most opprobrious words addressed to a person who is ignorant of the language, will not stir up his anger. In these, and a thousand other instances which might be mentioned, it is quite manifest, that the exciting causes operate only through the mind, which again, so far as we know, produces all its influence by the organization. Finally, it is possible to point out the identical nerves by which the brain and various parts of the body are connected; and it is a matter of daily observation, that when these nerves are diseased or wounded, so as to interrupt the connection, though all other circumstances remain the same, the mind no longer manifests itself by or in those parts. A certain degree of animal life, in other words, may be carried on for a time, without the slightest display of either intellect or feeling. The discussion of this interesting subject, which is scarcely accessible in all its bearings to the general reader, is entered into at length in Dr SPURZHEIM's larger work.

The chief objections to be mentioned, are certain facts of injuries done to the brain not having interfered with or prevented the manifestations of the mind, from which it is inferred that that organ is not essential to their production. These facts are admitted to have occurred; but, when accurately considered, do not in the least contradict the opinion maintained, any more than similar facts as to vision having been carried on with one eye, after the destruction of the other, or hearing with one ear, demonstrate that the eyes and ears are not the organs of their respective senses. The same explanation is to be given in the cases alluded to. In reality, the brain is a double organ, as is manifest on dissecting it; and hence it is easily to be understood, that parts of it situate on one side may be diseased, or actually lost, as has sometimes happened, and yet that the manifestations of the mind may be carried on by its corresponding parts,

which are situate on the other side. No valid argument, then, can be drawn from such facts against the doctrine, whilst, on the contrary, some others which might be adduced in greater number, of the loss of the faculties of the mind consequent on injuries done to the brain, are entitled to the fullest authority in its support. It is quite conceivable, on the principles of this doctrine, that the whole of one of the hemispheres of the brain may be destroyed, and that the other shall continue to manifest the mind; but it is most positively denied that ever both hemispheres were destroyed, or any loss or disease of corresponding parts in them sustained, without its total or partial disappearance. Besides this general reason for the inadequacy of the facts which have been mentioned in opposition to the doctrine, it is proper to remark, that great inaccuracy has been often committed in relating them, or rather in the opinions which have suggested them, and the deductions to which they have given rise. Such reports commonly affirm, that the person continued to walk, to eat and drink, to know his acquaintances, to recollect events, to exercise judgment, to carry on his business, &c.—undoubted evidences of mind indeed, but not by any means all the manifestations of which it is capable, or all which the persons formerly displayed. A metaphysical error, afterwards to be exposed, lies at the very foundation of all such reports, in virtue of which, it is imagined, that indications of consciousness, memory, judgment, are competent proofs of the existence of certain general faculties so denominated. No wonder, then, that the reporters contented themselves with their conclusions, and did not proceed to make inquiry as to the loss or injury of special intellectual and moral powers.

After a wide, and it is believed, unexceptionable induction, therefore, there seems good reason for crediting the fundamental proposition of this doctrine, that the brain is

exclusively the organ by which the mind manifests the whole of its powers; and that, without it, no manifestations ever have been, or can be exhibited. An important question now arises:—Is the brain one single organ, or does it consist of as many particular organs as there are primitive powers of mind?

Both opinions have been entertained, almost from the earliest dawn of philosophical inquiry. Dr SPURZHEIM has specified upwards of thirty authors who have written either expressly or incidentally on the subject, and who may be divided, pretty equally, into two parties—one which asserts the singleness or individuality, and another the complex nature or plurality of the organ of the mind. We are prepared to expect that he joins with the latter. A sketch of his reasons may not prove unacceptable.

It is generally observed, that nature employs various means of accomplishing various ends, and multiplies resources without limit, as the occasions for them demand. Thus, plants are differently organized, suitably to the differences of their products; animals are modified so as to correspond with the variety of conditions and circumstances in which they are found; there is a particular organ provided for every one of the animal functions; and the organs of the five external senses are distinct and independent of each other. It is very presumable, on analogy, therefore, that all the internal functions and powers are accommodated with separate and properly adjusted organs.

Again, on the supposition which is here conceived to be proved, that the brain is the organ of the mind, it might have been expected *a priori*, that the brains of different animals should differ, because it is certain that their faculties and propensities do so. Now, it is actually found, that their brains differ no less than their faculties, and the instruments of voluntary motion with which they are fur-

nished. In general, the brain becomes complicated in proportion to the extent and variety of the functions; and this appears to be so well established as a law of nature, that different individuals of the same species, and even the same individuals in different stages of their growth and duration, shew differences in cerebral organization. All this is easily explicable on the principle that the brain is a complex organ, or rather a combination of organs, each of which has its own office to perform in the animal economy.

Farther, it is certain, that the same individual manifests some propensities and powers in a high degree, while others are scarcely discoverable in him, though quite natural, or frequently belonging to his species. One man, for example, has an excellent memory as to words, but is utterly unable to carry on a process of reasoning on any abstract or philosophical subject. Another displays a genius for painting, but is insensible to the beauties of music. A third excels in mathematical science, but has not a particle of taste for poetry. These, and many more peculiarities, seem utterly irreconcilable with the notion, that one identical mass of brain presides over all the functions; but it is easily understood, on the supposition contended for, that the organs are as various as the functions. Indeed, the former opinion seems no less absurd than the belief, that one organ answers all the purposes of the five external senses.

Something similar to what has now been mentioned, and equally susceptible of explanation on the same grounds, is the fact of the propensities and faculties not appearing or disappearing simultaneously, but some earlier than others. This cannot be reconciled with the opinion, that all the manifestations of the mind depend on one organ. Other considerations might be added, tending to the same point. Thus, change of study, or of the object and kind of attention, relieves the sense of fatigue;—in the state of sleep,

some of the organs occasionally continue active, whilst the others are at rest, which constitutes the phenomenon of dreaming, and, in certain peculiarities of body, that of somnambulism:—in some diseases, the manifestations of the mind are partially deranged; or, in other words, some of the mental organs are disordered, while the rest remain sound.

On the whole, then, it is thought demonstrable, that the brain is not one organ, but a combination of many organs, and that every one of these is destined to a particular kind of manifestation of mind. It is now to be inquired, If these organs can be determined or pointed out? The investigation thus suggested is not a new one, but perhaps has never hitherto been properly conducted.

Some philosophers have concluded, that the functions of the brain are proportioned to its absolute size; and that the superiority of man is the result of his possessing more brain than any other animal. But this assertion is incorrect. The whale and the elephant have larger brains than he has, but surely do not equal him in intellect. Moreover, monkeys and dogs surpass the ox and ass in the extent of their faculties, but have far less brains; and many animals which have equal sized brains, differ essentially in kind and degree of faculties. This opinion then gave way to another, that the faculties are in the proportion of the relation of the size of the brain to that of the body. According to this, the superiority of man depended, not on the absolute, but the relative magnitude of his brain. But even this is incapable of being maintained, unless it be allowed that sparrows, linnets, and many other birds, which have larger brains in proportion to their bodies, surpass him in intellectual powers; and that, for a similar reason, rats and mice excel the horse, the dog, and even the elephant. To which may be added, the fact of children having larger brains, in

proportion to their size, than adults. Other comparisons have been proposed, in order to determine the question, as between the size of the brains and that of the nerves, or between the former and that of the spinal marrow. These seem to hold more generally true, but are nevertheless liable to insuperable objections; and, at all events, being only practicable on the dead subject, can be of no use whatever as a foundation for physiognomical science.

The celebrated CAMPER proposed another mode of ascertaining the degrees of intellect, not only in man, but also the lower animals. It is perfectly fanciful; but, being ingenious, and corresponding with a vast number of facts, has obtained the approbation of many eminent men. The name of the *facial angle* is given to it, because, a vertical line being drawn from the upper lip to the most projecting point of the forehead, and a horizontal one running in the direction of the plane of the edge of the upper teeth towards the opening of the ear, it is conceived, that the understanding of animals is in the proportion of the obtuseness of the included space. But, although all the faculties of the mind had their organs in the fore part of the head, this facial angle would be an unfair and erroneous method of estimating them, as might be shewn on anatomical grounds. It becomes more evidently objectionable, when, admitting its application to the measurement of the forehead, it is discovered to be totally inapplicable to the lateral and posterior parts, in which, however, a very large portion of brain is commonly found. Another angle, called *occipital*, from the name of the bone to which it is referred, and proposed by DAUBENTON for a similar purpose, is not more to be trusted to.

CUVIER and others have compared the different parts of the brain together, with the view of determining their functions: but the results will be found often in contradiction

to the best established facts, and are, therefore, in this respect at least, undeserving of confidence.

The anatomical structure of the brain has been explored, in order to point out the intellectual organs; and it has often been reported, indeed, that this new doctrine is founded on the results of such an examination. But this is not the case. On the contrary, Dr SPURZHEIM is of opinion, that anatomy seldom affords light as to the functions of any of the organs, and affirms most positively, that a knowledge of the structure has not led to that discovery. The reason seems obviously to depend on the fact of our total inability to explain the phenomena of living beings, a single step beyond the laws of matter, whether mechanical or chemical. As far as these go, we can proceed with a probability, perhaps a certainty of success; but, soon or late, we come to a point where all our knowledge fails us, and inquiry only demonstrates the insufficiency of our means of advancing. This occurs sooner in some cases than in others, but is universally met with in that region which distinguishes an animated being from a dead carcase. The structure of the eye is admirably contrived, on the principles of optics, to receive rays of light, and the figures of bodies. But who, after tracing them to the retina, on which their inverted images are formed, can explain in what manner the optic nerve is necessary to the information of the mind, as to the existence of their prototypes in a very different state externally? We can pursue undulations of the air to the membrane of the ear, and imagine them echoing through the mazy vaults of that curious fabric; but does this satisfy our minds as to the whole process of hearing? Far from it. We are more perplexed than ever, to account for the perfection and excellence of that sense. Now, in these two examples, it will be allowed, an aid has been lent to anatomy, which it does not ordinarily enjoy. We find, accord-

ingly, that, though prosecuted to the utmost, it merely shews us the relationship, or adaptation of parts, to the functions which have otherwise been discovered. The best proof of this, perhaps, is the circumstance of there still existing several organs in the body, whose functions are unknown, although their anatomical structure have been no less diligently explored than that of other parts. It is perfectly conceivable, that the brain may be in the like predicament; but hitherto, it is presumed, no anatomist will declare that it is so. It may be possible, notwithstanding, on other grounds, to determine the organs of which it consists; and this is actually affirmed to have been done, in certain cases at least, by the labours we are now considering. It remains for succeeding inquirers to point out, in respect of them, as in other organs, the relation between the structure and the functions thus discovered. In the mean time, it is maintained by Dr Spurzheim, that neither human anatomy nor comparative or animal anatomy, has promoted, in any remarkable degree, the physiology of this puzzling member.

A system of mutilating and torturing has been practised on living animals, by other philosophers, in the hopes (scarcely cogent enough to vindicate the barbarity) of determining the functions of the brain. The principle is that of removing various parts of it, in order to see which of the faculties were impaired or destroyed *. Among other obvious objections to any deductions from such a process, what was formerly noticed as to the doubleness or duplicate nature of the organs, ought to be remembered; and also

* A report by the celebrated Cuvier to the Academy of Sciences on some experiments of M. Floutens, of the nature here alluded to, has lately been published in Paris; but the results scarcely justify the means employed in attaining them.

that source of error which has been alluded to, the supposition that there exist general faculties answerable to the abstract terms, imagination, memory, &c. There is not the slightest occasion for these violent operations. Nature has been a more merciful, as well as a more skilful experimentalist, and has actually, in a vast variety of ways, and on a large scale, produced examples of brains, comparatively speaking, defective. Some of these are afterwards to be contemplated.

The principle assumed by Dr SPURZHEIM, is, that "the "energy of the functions of any organic part depends on "its size, and on its organic constitution." But it is proper to add, that, in judging of the degree of activity of the faculties, he admits the necessity of considering "the exer- "cise of every faculty, and the mutual influence of the "faculties upon each other." It is obvious, however, that it is on the size of the organs, whatever or wherever they may be, that he chiefly depends, as more easily observed than any of the other conditions, and in reality sufficient of itself to determine the nature of the functions.

The principles of the method now proposed, abstracted from the arguments by which they are defended, may be summed up in a few words. The different parts of the brain, considered, as has been mentioned, a combination of various organs, are differently developed; the functions of those which are most so, are conceived to manifest themselves with more energy, those of the parts which are least developed, being correspondingly less active. The development of the different parts of the brain is conceived to be appreciable by respective modifications of the bones which include and protect it: and hence, from these modifications, it is asserted to be possible to infer the functions themselves, and therefore, in a great degree, the propensities, talents, and characters of individuals. But though this be a ge-

neral view of the system, it is essential to notice, that it requires most materal qualifications and explanations.

First, Let it be understood why the form and size of the head are imagined to be indicative of the dimensions and conformation of the brain. This subject is discussed by Dr SPURZHEIM, in his reply to the question, whether it is the skull or the brain which determines the form of the head? The following statement will afford some information to the general inquirer, though it can have little pretensions to the regard of professional men.

The brain exists, in the *earliest* stage, before it is covered by the skull, enveloped in a kind of membranous bag, which is fourfold, and exactly represents its form. The outermost fold is of a gristly nature, but gradually assumes a bony consistency, though with different degrees of rapidity in different places; so that, at the time of birth, about eight bones may be discerned in it. These are commonly connected together by a kind of articulation called Sutures, in such a manner as to preserve and indicate the exact size and form of the brain. Any compression or alteration of shape which the head undergoes in birth, is usually of very short duration; and, in all probability, at least in general, makes no difference in the relation between the brain and the bones. So far, therefore, it is fairly imagined, the brain determines the form of the head, and not the bony covering; and, it may well be doubted, if any after process, in the ordinary course of nature, invert this law. Dr SPURZHEIM has particularly investigated this point in all its extent, and gives very satisfactory reasons for the inference now stated, which is clearly of fundamental importance to his system.

Secondly, We must distinguish between the neat size of the skull, and the gross dimensions of the head. The

former alone is of moment in this system. Inattention to allow for and except several things, which serve to make up the latter, will infallibly produce mistake in determining the developments. It is necessary also to be acquainted with the common size of the head, so as to be able always to notice, at first view, whether any one is larger or smaller than usual; and certain irregular and accidental bony excrescences and elevations must not be confounded with the characteristic signs of the organs. There are even some protuberances constantly met with, because destined to particular uses in the animal economy, which have no manner of reference to the development of the organs; and are consequently not to be taken into account, though, by affording some direction as to their situations, they may aid the investigation:—of some of these, it is important for the unscientific student to be early apprised, lest he should err in the very outset. The necessary information on this subject, and on the peculiar anatomical construction of the bones of the skull, from which it has been alleged there arise invincible objections to the practice of the system, is given in Dr SPURZHEIM's work. It is enough to allude to them at present. All that it is requisite to add here, is, that results of the examination of the head cannot generally be relied on, after the individual has reached that period of life, different in different persons, when the brain begins to diminish in size. The most certain indications are given at those ages in which the faculties have the greatest degree of activity. Sight and touch are required to determine all the organs, but one of them is sufficient as to several. The eye is more generally useful, and would alone be adequate, if the skull were completely exposed. A good many difficulties are occasionally to be encountered.

Thus, though one organ is much developed, and the neighbouring ones are not so, it is very easy to come to a

conclusion as to the former; yet it sometimes happens, that several organs in the vicinity of each other are equally or proportionally developed; so that, in place of a protuberance, from which the indication might be taken, a smooth or regular surface is met with. Some difficulty is now and then presented, by what are called the frontal sinuses, certain cavities situate within the two plates of the bone of the forehead, a little above the root of the nose, and which, in some persons, are so large as to occasion a kind of crest or ridge on that part of the face. The organs, too, which are placed behind the orbits of the eyes, are not readily distinguished. But the greatest difficulty is said to arise from the circumstance of any one organ being so extremely developed, as to push the neighbouring organs from the places usually occupied by them. Into the consideration of these and other perplexities I cannot now enter.

Thirdly, It must not be imagined that it is the mere surface of the brain which constitutes the organs. On the contrary, these are conceived to extend downwards throughout the whole, or nearly the whole mass of the brain. It is possible, too, that there may exist organs, no part of which approaches to the surface, as it is certain that there are convolutions in the brain so situate as not to contribute directly to the external form. But Dr SPURZHEIM gives it as his opinion, without attaching much weight to it, that a great part of every organ, stated as ascertained, lies at the surface, and that, at all events, if one part of an organ be much developed, the whole of it so participates in the development, as to be appreciable in the external configuration and size.

Lastly, It is admitted that there are cases in which it is impossible to determine the size of the brain in general, or of its individual parts, from the dimensions or the form of

the head. Thus, the brain may be diminished from age, though the external size and form remain nearly the same; in which case, the skull itself becomes thicker than formerly. A similar change is sometimes found in cases of insanity; and, it is probable, that certain diseases of long continuance may prove no less destructive of the ordinary indications.

Some considerations of a still more general nature, affecting the very foundation of metaphysical science, and leading to very singular and highly important results, now demand our regard.

The nature of man is to be studied in the same manner as that of other created beings. It presents two subjects for examination, namely, bodily structure and functions; the former constituting the object of anatomy, and the latter the objects of physiology. Taken in its largest extent, this study might be directed to four points. 1*st*, The structure of the whole body, and of each of its parts: 2*d*, The functions of the whole, and those of the parts: 3*d*, The mutual influence of the parts and functions; and, 4*thly*, The relations which men bear to one another, and to all the beings around them. How wide a field this is, and how important to mankind, need not be mentioned. In the science of Phrenology, we confine our attention chiefly, if not entirely, to those functions which takes place with consciousness, and to those peculiarities in the structure or organization, by which they are manifested. Here, then, no inquiry is hazarded into the nature of Spirit, of which it is conceived to be impossible to obtain any knowledge otherwise than as it is manifested through the instrumentality of gross and material agents. It would be equally vain, it is believed, to attempt to investigate the nature or essence of Matter; and hence, therefore, structure and functions alone claim our regard. "We never (says Dr SPURZHEIM) ven-

" ture beyond experience. We neither deny nor affirm " any thing which cannot be verified by experiment. We " do not make researches either upon the dead body, or " upon the soul alone, but upon man as he appears in life. " We consider the faculties of the mind, only so far as they " become apparent to us by the organization. We never " question what the moral and intellectual faculties may be " in themselves. We do not attempt to explain how the " body and soul are joined together, and exercise a mutual " influence. We do not examine what the soul can do with- " out the body. Souls, so far as we know, may be united " to bodies at the moment of conception, or afterwards; " they may be different in different individuals, or of the " same kind in every one; they may be emanations from " GOD, or something essentially different. Hence, what- " ever metaphysicians and theologians may decide in re- " spect to all these points, our assertion concerning the " manifestations of the mind, in this life, cannot be sha- " ken." A practical steady adherence to the spirit of these declarations must at least exclude one source, and that a very abundant one, of unavailing controversy.

The first thing that strikes an observer, proceeding on the plan, and according to the restrictions now suggested, is, that the manifestations of the mind seem to be somewhat different in the two sexes, in different individuals, and in the same individuals at different ages. These differences, too, are met with, in spite of the uniformity of education, opinion, customs, professions, and employments. One person has obviously more capacity, and a greater inclination for one pursuit than for another. This is found even in children; and differences of this kind are no less remarkable than those peculiarities of feature and expression by which mankind are commonly distinguished. It is farther observable, that all the manifestations of the mind do not,

by any means, occur at the same period of life. Some are presented earlier, some later, in the history or progress of individuals; and the times of disappearance of the faculties and propensities are at least equally various. How are these modifications to be explained? Certainly not without taking into account the successive and probably connected changes in the organization.

LAVATER and others imagined that the whole body determined the manifestations of the powers. But it is objected to this idea, that there is often no discoverable harmony among the different parts, nor any proportion between them and the entire system. In opposition, therefore, to the physiognomical hypothesis of that ingenious but assuredly fanciful writer, Dr SPURZHEIM maintained, that all the parts have their own specific functions; that these functions depend on the healthy state and action of the corresponding organization; and that it is only in so far as their related organizations are dependent on each other, that the parts mutually contribute to one another's functions. There is no evidence whatever, in short, that the manifestations of the mind depend at all on the size and shape of the whole body; and, in general, it is remarked, in opposition to such an opinion, that little or short persons display, comparatively or proportionally, more intellect than large or tall ones.

The organic constitutions, or what are called the physical temperaments, have been advanced by other authors, both in ancient and modern times, as that on which the faculties depend. But this is a theory which may be proved to be no less erroneous, though, it must be admitted, that these temperaments appear to occasion very different degrees in the activity of the faculties. A very slight examination will convince any person, that similar manifestations of mind,—similar, that is, in kind, frequently exist

in different temperaments, and that very different manifestations are frequently found in the same sort or species of temperament. In point of fact, then, there is no discoverable proportion whatever between the vital functions, which are chiefly affected by the temperaments, and the faculties of the mind; and, therefore, none between the temperaments and the faculties. "A man (says Dr "SPURZHEIM justly) may be well nourished and active, "and yet at the same time either stupid or intelligent. "Many persons who have a melancholy look, are not at all "melancholy;—we find sanguine and bilious individuals, "who are intellectual or stupid, meek or impetuous;— "and we may observe phlegmatics of a bold, quarrelsome, "and imperious character. In short, the doctrine of the "temperaments, as applied to the indication of determi- "nate faculties, is not more sure, nor better founded, than "is divination by the hands, the feet, skin, hair, ears, and "similar physiognomical signs."

MALEBRANCHE was of opinion that the differences in thinking and feeling, as exhibited by men and women, depended on the differences in the degrees of delicacy in the fibres of their brains; and Dr MANDEVILLE, the author of the "Fable of the Bees," apparently entertaining a similar notion, argues stoutly for the superiority of the fair sex, on the ground that they are the *finest* specimen of Nature's workmanship. Perhaps the poet BURNS, very allowably in his profession, adopted the same complimentary fiction, as may be gathered from one of his most popular songs:—

> "Her prentice hand she tried on man,
> "And then she made the lasses."

But this is mere idle conjecture, unauthenticated by observation, and which only requires to be noticed, in order to ensure its condemnation.

It is time now to specify the mode in which Drs GALL and SPURZHEIM proceeded, with the view of determining the functions.

The Society have already heard *, that Dr GALL, the founder of this new science, early noticed certain differences of faculties and propensities in the members of his family, and among his school-fellows. He was grieved to find that several of them greatly excelled him in the facility with which they learned their lessons by heart; but, on the other hand, he had the satisfaction to perceive, that he was their equal, if not their superior in the powers of reflection and reasoning. The observation that, in those persons who had good verbal memories, the eyes were particularly prominent or full, was the foundation and commencement of his inquiries into the relation existing between the bodily structures and the mental functions: and these inquiries he was the more induced to prosecute, in consequence of observing, during his subsequent study of medicine, that the functions of the brain were not well understood, if understood at all, by the profession. It now occurred to him, in following up his original remark, that it was very possible the faculties of the mind might be distinguished by the conformation of the head.

But the notions as to metaphysical subjects, which he had acquired in the schools, for some time obstructed his inquiries; or, more strictly speaking, directed them into a wrong channel. He had been led to believe in the common doctrine, that there existed certain general intellectual faculties, such as memory, judgment, and imagination; and, accordingly, he naturally looked for the signs of such, in the size and the form of the head, without ever being aware or suspecting that these were creatures of metaphy-

* Preliminary Dissertation, pp. 2—7.

sical abstraction, merely logical distinctions, which have no more status or reality of existence than any other of the ideal objects designated by general terms, and without knowing, on the other hand, that the feelings and sentiments had also their origin in the brain, or were somehow dependent on its constitution. About ten years, then, were spent in endeavouring to discover where the general faculties he was in search of were situate. But a century would have been equally inadequate to his success,—and for the most cogent of all reasons,—there are no such faculties. "If there be one excellence or merit in Dr GALL "(said his colleague) for which I admire him more than "for any other, it is for the resolution he now took to aban- "don all preconceived opinions, and the best established "maxims of the schools, on the subject of human nature; "and to recommence the study of it by observation alone." It must be admitted, nevertheless, that the determination thus eulogized, was too unqualified, and that, in its prosecution Dr GALL was at first drawn into several very material errors. This is neither wonderful, nor greatly to his discredit.

His method was to compare the size and the conformation of the whole head with the favourite occupations or pursuits of individuals. Several curious but partial conclusions were the result; but to these, he found he was under the necessity of admitting there were sundry exceptions,—a fact which convinced him, either that he was not in the right track, or that he had not yet arrived at the truth; for it was a fundamental proposition in his mind, that nature is regular and constant.—"If the eye be the organ of sight, "(said he) vision can never exist without the eye; and it "is the same with the internal organs:—If any faculty be "attached to a particular organ, this organ can never be "wanting, if the faculty manifests itself." In place, there-

fore, of considering the general configuration of the head, in reference to particular faculties, Dr Gall now sought for a correspondence or coincidence between particular organs and the natural vocations or habitual actions of individuals; that is to say, those occupations and actions for which their faculties and inclinations seemed most to dispose and fit them. In this manner, accordingly, he discovered peculiar developments of the head in various persons who were noted for their excellence in certain professions and pursuits, as those of the mechanician, the mathematician, musicians, sculptors, &c. His observations of this kind were first confined to persons of what may be called partial genius, as, with propriety, supposed most likely to afford well marked organic indications; but they were afterwards extended to cases, in which, from circumstances, there was little danger of being misled by dissimulation or conceit; and ultimately they reached to persons taken indiscriminately from the lower classes, whom he called into his house, and, by various means, excited to such conversation and behaviour as might enable him to become acquainted with their respective characters. The office of physician to the Establishment for the Deaf and Dumb at Vienna, contributed essentially to his opportunities of acquiring information on the subject which now so deeply occupied his mind.

But an error of considerable magnitude still pervaded his investigations,—the consequence, apparently, of the resolution already mentioned not having been corrected by an acquaintance with what are now denominated the Special Faculties; and also of his not attending sufficiently to the fact, that those actions of mankind which he principally contemplated are rather the results of combinations of the faculties and propensities, than the simple product of any one of them by itself. Moreover, it is certain, that his names for the organs, which he discovered, in this manner,

to be somehow or other connected with the principal actions and propensities of men, were necessarily defective and incorrect,—a clear proof, we may be sure, of something faulty in his own conceptions. The impropriety of deducing them from the actions to which the supposed organs contributed, and, more especially, where those actions were grossly immoral and illegal, was indeed so obvious and so great, as to bring very general odium on the doctrine which they were meant to illustrate. An organ of theft and of murder, for example, could never be admitted, whilst it was perfectly certain that either of these transgressions might originate in a variety of motives. Although Dr GALL had been able to demonstrate that, in every person who committed them, a certain portion of the brain was peculiarly developed, this never could be allowed to be a proof that the discovered protuberances were the peccant parts. Dr SPURZHEIM was well aware of the implied absurdity, and seems to be entitled to the merit of having reformed the nomenclature, which he has endeavoured to derive, as much as possible, from the primitive feelings and radical designs or efforts of the faculties. He has acknowledged, too, the extreme difficulty of ascertaining these, in some cases, and would doubtless be thankful for any additional or corrective light which others might bring to bear on the subject. The means employed by Dr GALL, in order to ascertain the organs of the manifestations, are nevertheless unexceptionable,—two principles being considered proved, viz. 1. That the brain, considered as a combination of organs, is the instrument by which the mind, no matter how, manifests itself; and, 2. That the size of the organs is one of the elements from which we are to determine the nature of the functions of the various parts of the brain. He proceeded, then, on the inductive plan recommended by the father of modern philosophy, Lord BACON, of whom, not-

withstanding some errors, which, beyond all question, I imagine, have been abundantly visited by the severity of criticism, he may be justly commended as a faithful and an ardent disciple. Those persons, if, indeed, there are any such, who have carefully studied the immensity of facts by which he has established his principal conclusions in this science, and have either disproved them by more abundant or more correct evidence, or have superseded them by the fruit of wider inquiry, are alone warranted in refusing his claims to this honourable title. The merit of his colleague, on the other hand, it is probable, will be less contested, at least in this country, since the many opportunities which his visit afforded of displaying the endowments of his truly philosophical mind, were calculated most effectively to dissipate the injurious prejudices that were so industriously excited against his name, his character, and his doctrines. The vigour of his intellect refused no toil in the cause of science. The promptitude of his spirit and his zeal secured efficiency of judgment, and patient inquiry, on occasions which might have been thought trivial and unpromising by common observers. His serene, probably because his conscientious reliance on the ultimate triumph of truth, supported him against the obstinacy of ignorance, and the malevolence of systematic error; and to these high endowments, so requisite to the character of a philosopher, especially when waging war with established creeds, he added a simplicity and a gentleness of manners which did not fail to conciliate regard, where his reasoning and his extensive information were urged seemingly in vain. I offer you this testimony, Gentlemen, as that of one who knew not Dr Spurzheim, till prejudice, folly, and presumption had accomplished their wonted drudgery of misrepresentation and slander; and I must be allowed to persuade myself, that the can-

dour and the kindliness with which you receive it are incontestible proofs of its accuracy *.

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* The language in which I have spoken of the treatment awarded in this country to Drs Gall and Spurzheim, and especially by some individuals who assumed to guide the public mind in matters of literature and science, may seem harsh and opprobrious. I could appeal, for evidence of its justness, to various works; but almost any one shred of the memorable tissue of misrepresentation, conceit and effrontery, which disgraces the far-famed journal of our metropolis, will bear me out. "We look upon the "whole doctrines taught by these two modern peripatetics, anatomical, "physiological, and physiognomical, as a piece of *thorough quackery* from "beginning to end."—"Were they to succeed in shaking off the suspicion "of *mala fides*, which we apprehend is inseparably attached to their charac- "ter," &c.—"The system (of the diverging and converging fibres of the "brain), is a complete fiction from beginning to end."—"It is a wilful "misrepresentation in them to affirm, that either diverging or converging "fibres can be shown."—"It certainly required the hardihood of those "never-to-be-appalled gentlemen to endeavour to demonstrate," &c.—"The "writings of Drs Gall and Spurzheim have not added one fact to the stock "of our knowledge, respecting either the structure or the functions of "man; but consist of such a mixture of gross errors, extravagant observa- "tions, downright misstatements, and unmeaning quotations from Scripture, "as can leave no doubt, we apprehend, in the minds of honest and intelli- "gent men, as to the real ignorance, the real hypocrisy, and the real empi- "ricism of the authors."—*Edin. Review*, No. 49. The article from which these passages are taken, will at once record the ignorance which prevailed at the period in question, even among philosophers, regarding the functions of the brain and the faculties of the mind, and afford a criterion, by which posterity will assuredly judge of the magnitude and value of the discoveries of Drs Gall and Spurzheim.

May I may be allowed to take this opportunity of stating, that the objection to Phrenology, as founded on Materialism, and leading to infidelity, seems to me one of the most irrational and unjust allegations ever brought against any science. In reality, the perfect, explicit, unqualified correspondence of the doctrines of the system with those portions of the Sacred Scriptures which relate to the character of man, is, to my mind, an incidental, but a powerful evidence of truth, which I confess I have looked for in vain in the proud metaphysics of the schools.

The common division of the faculties of the mind into Will and Understanding, is discarded from this system, at least as modified by Dr SPURZHEIM, together with that notion which refers the faculties of animals to something called *Instinct*, in opposition to the understanding of man. According to him, Will, a term often employed to denote every propensity, ought not to be considered as a particular class of functions distinct from the intellectual faculties; for all the faculties, whether moral or intellectual, so soon as they become active, have their corresponding desires or propensities, and may be excited from the lowest degree of inclination, to the highest degree of passion. But he does not imagine that all the faculties are capable of the same modifications of action. The moral sentiments, for example, are said to produce feelings only, but not to possess either memory or judgment, while the intellectual faculties present both. Farther, it is conceived that there is a difference observable between the feelings, some of which produce a mere propensity, while others, besides a propensity, are accompanied by a peculiar kind of sensation, which must be experienced in order to be understood. Of this last sort are self-love, justice, compassion; some of them are proper to man, others are common to him and the lower animals, as are the faculties to which the name of Propensities is given. Those faculties, again, by which we become acquainted with the external world and the qualities of bodies, Dr SPURZHEIM denominates Knowing Faculties, for want of a better title, and in contradistinction to certain other intellectual powers by which we compare "the relations between the different external bodies, the relations "between the external bodies and the internal faculties, and "those between the internal faculties themselves," which he styles Reflecting Faculties. The term *Mind* is considered, in this system, as nearly synonymous with *Faculties*.

Here it is requisite to say a word or two, in explanation of the phraseology employed to denote the faculties. This is certainly an innovation, and can be tolerated only on the ground of necessity. It is no doubt fair that the founders of a new science be allowed to avail themselves of every possible combination or invention of words which shall most suitably apply to their subject. Dr SPURZHEIM ingeniously argued for this right of coining terms, particularly compound ones, which the genius of his own language, the German, much more easily admits than English. The termination *ive* is employed to denote *the quality of producing*, and *ness, the abstract* state. These are joined to different roots, as much as possible chosen from the English language; failing this source, from Latin participles in common use; and, in one case, from Greek words. Terms, therefore, which end in *iveness*, signify different propensities, conceived to be peculiar faculties of the mind. They have a strange appearance, it is true, and are often troublesome from their length; but the preciseness of their signification, and the circumstance of their saving much circumlocution, repay the sacrifice of taste, and the toil of pronunciation which they require. Dr SPURZHEIM entered on a particular defence of some of these terms; but, at the same time, declared his anxiety to be put in possession of better, as he had no ambition to gratify by so hazardous an innovation.

Dr SPURZHEIM did not treat of the organs, in the order in which they are said to have been discovered, but according to their situation in the brain, beginning with that which is lowest in the back part of the head, where the cerebellum, or little brain, is situate. The Outline of the System, and the Plate, in the hands of all the members, will afford an intelligible idea of their nature, number, and relative importance; but the assistance of a figure, and some portion of anatomical knowledge, are requisite to a correct acquaintance with their positions.

It is not affirmed that all the organs which have been enumerated are equally demonstrable, or have been with equal certainty determined. On the contrary, several of them were considered somewhat doubtful, and as resting on an insufficient number of observations; a few are merely conjectured to exist; and of these, very vague notions were probably entertained: but the greater part, Dr SPURZHEIM asserted to be established in such a manner as entirely to exclude scepticism, and the apprehension of mistake. I need not tell you, that subsequent inquiries have both confirmed and greatly extended the system. The most cautious inquirer, it might be remarked, is bound to admit the facts brought forward regarding the coincidence between the faculties and certain developments of the brain, indicated by corresponding modifications of the skull, but he is not *therefore* necessitated to go the length of deciding that these developments are the seats of the faculties; or, in other words, the residence of the soul—a question, as already stated, never once agitated in this system. But, even admitting this to be the case, it is perfectly obvious, that the accumulation of such facts contributes essentially to our acquaintance with human nature, and lays the basis of a rational system of physiognomical science. In this point of view, then, were there nothing else to recommend them, the labours of GALL and SPURZHEIM merit high distinction in the records of science.

But it would be unjust, I apprehend, to limit the claims of this doctrine to any rank, however elevated, in physics merely: and I am greatly deceived, if the facilities which it presents for the prosecution of intellectual philosophy—of all those studies, in short, which have the human constitution and character for their object, will not, ere long, be extensively admitted as constituting one of its chief recommendations. Indeed, I think I perceive the dread of this, in the conduct of some of its recent antagonists,—a sort of

tremulous anxiety which I confess I have difficulty in believing to proceed so much from a generous love of truth, as a jealousy lest the honours of a declining rival should altogether vanish. The shock which the science of Metaphysics, if such it must be called, has experienced in our own day, might have been expected to occasion a considerable degree of uneasiness on the part of its conscientious votaries, and almost justifies it; because it is as impossible for a human being to be quite insensible to popular opinion, as it would be improper for him if he could: But the pertinacity which continues to idolize systems and creeds, after an experiment of two thousand years duration has shewn them to be unproductive of any real benefit to mankind—and which, in demonstrating its devotedness, does not scruple to disport itself in unmanly slanders and detestable ribaldry, can have no other source than a perverted understanding and a vicious heart. The prostitution of talents, which we have all of us had occasion to witness, in the opposition made to Phrenology, and the frequent exposures of unhappy defects and bad habits, volunteered by some of its enemies, while they neither affect its foundation, nor ruffle the temper of its disciples, are productive of essential, but, it must be allowed, very painful advantages;—they furnish ample materials for the confirmation of its truth, and no less ample motives and opportunities for the exercise of that forbearance and compassion which it is one of its excellencies imperatively to inculcate.

I beg leave to conclude these remarks in the expressions and highly appropriate language of the late Mr PLAYFAIR. "Even in matters purely intellectual, the prejudices and "the selfishness, or the vanity of those who pursue them, "not unfrequently combine to resist improvements, and "often engage no inconsiderable degree of talent in draw-"ing back, instead of pushing forward, the machine of

" science. The introduction of methods entirely new, " must often change the relative place of the men engaged " in scientific pursuits; and must oblige many, after de- " scending from the stations they formerly occupied, to " take a lower rank in the scale of intellectual advance- " ment. The enmity of such men, if they be not ani- " mated by a spirit of real candour, and the love of truth, " is likely to be directed against methods by which their " vanity is mortified, and their importance lessened."

II.—*On the Functions of Combativeness, Destructiveness, and Secretiveness—with Illustrations of the effects of different degrees of their endowment on the Characters of Individuals.*

By Mr Scott.

Among the prejudices which are entertained on the subject of Phrenology, there is none more general, or which seems to stand more in the way of its cordial reception, than the very erroneous one, that it considers man as endowed with some propensities that are purely evil. That a doctrine of this kind should have excited some alarm and opposition, will not appear surprising, when it is considered how much it is adverse to those ideas which we love to entertain of the dignity and perfection of human nature. To suppose that any powers or propensities were implanted in us, originally and intrinsically bad, not only shocks our self-love, and that complacency with which we are prone to view our character, but seems to impeach the goodness of the Divine Author of our being, in whose image we are told that we were originally formed.

Though I have called this, as I conceive it to be, an erroneous prejudice, it cannot be denied, that, at one time, there did appear some foundation for the reproach which it seemed to cast upon Phrenology; when, at the first promulgation of its doctrines by Dr Gall, he stated, among the organs which he held to compose the mass of the brain, an organ of Theft and an organ of Murder. It was natural, and even perhaps necessary, at first, to term them so, from their being first observed only in that state of great development in which they were found in notorious rogues and condemned criminals, and before a more extended observation had shewn them to have a larger and more general function. I even consider this original defect in the science, to be one of the many evidences of its truth, and of the honesty and fearlessness of its first cultivators. In promulgating their discoveries to the world, they seem to have entirely disregarded all previous opinions on the subject—to have paid no respect whatever, either to philosophical theory or vulgar prejudice—and to have stated what they observed, or what they conceived to be true, utterly regardless of all sorts of consequences. That, in doing so, they should commit errors—that they should occasionally miss the true tendency of a faculty—that they should mistake the abuses of a power for its natural and legitimate uses—is just what was to have been expected; and the only astonishing part of the affair is, that, within so short a space as has elapsed since these doctrines were first heard of, they should already have assumed so much the appearance of a science and a system. It does appear wonderful, and to many almost incredible, that no fewer than thirty-three separate special faculties should have been discovered, and many of them ascertained by evidence of the most convincing kind, and that all this should have been done during

the lifetime of one man—when Metaphysicians have been labouring for 2000 years, without being able to establish a single mental power on any thing like solid or satisfactory grounds. To those who object that all this is incredible and impossible, it may be sufficient to say, that there is but one path which leads to truth; that if we miss it, we may blunder on for ever, without coming one step nearer the object of our investigation: but that this being once discovered, every part of our progress thenceforth becomes obvious and easy. This has been exemplified in the nineteenth century, in two instances—the opening of the Second Pyramid at Giza, and the discovery of Phrenology.

It is farther to be remarked, that the changes that have taken place in the aspect of this science, are not mere changes without improvement, but that each of them is a step gained, and a movement in advance, not inconsistent with any thing that went before, but connecting it with something else that includes and comprehends it. It has not been the case here, as hitherto in metaphysics, that one votary of the study has taken it upon him to overturn all the labours of his predecessors, and erect a new fabric of his own. The science has proceeded without one retrograde movement; and a principle once fixed, is never lost sight of, although it may be afterwards found to be included in another principle of larger extent and more general application. Still, however, we are on the mere threshold. Much remains to be done in generalizing and liberalizing the study, and bringing it up to the pitch of improvement which the present state of cultivation of the human faculties and of the other sciences demands. Many and great are the labours that must be gone through, before all this is accomplished, and more, probably, than the present generation will ever see; but this is not to prevent us from doing what we can.

Among the improvements that have already taken place in the science, there is none greater than that gradual and cautious advance from fact to principle, of which, I believe, the chief merit belongs to Dr SPURZHEIM—in giving to the powers names indicating a general feeling and propensity and not an impulse to a particular act. Thus, in place of an organ of Theft and of Murder, we have now the organs of Acquisitiveness and Destructiveness. This, no doubt, removes, in part, the objection to which I at first alluded; but still, without some farther explanation, it may be, and by many is thought, that the science holds out these to be naturally bad propensities, and such as our nature would be better without. Secretiveness also seems to be held of evil tendency, though no longer denominated the organ of Deceit. It is no doubt known to those who are farther advanced in the study, that these propensities are not necessarily, or even principally evil; that, on the contrary, they are necessary constituent parts of our nature, which would be imperfect without them; that their principal aim and intention, when under due regulation from higher powers, is altogether good; and that, as in all other parts of nature, the evil which sometimes arises from their abuse or over activity, is only accidental and casual—the exceptions and not the general rule. Although all this is perfectly known and acknowledged by those who have made progress in the science, it has not as yet been brought out thoroughly in any detailed exposition of the several powers and their functions. Those who have hitherto written on the subject, have had so vast a field of other matter to discuss, that they have not had leisure to enter upon questions of this nature. I have therefore thought it might be useful, without at all pretending to any thing new, to give a more detailed view than they have done, of the functions of some of the propensities and powers; and I have chosen for the subject of

this Essay, three which are generally considered to have most of the animal, and least of the man in them, Combativeness, Destructiveness, and Secretiveness.

It may appear to require some apology, that one who is a mere tyro in the study, should present himself thus early to the notice of the Society in this way; but I shall only, on this account, solicit a larger share of their indulgence, as I hope it will not be objected to any one, that he endeavours to do what appears to him practicable, because it might have been better done by another and an abler hand. We are all fellow labourers in the same vineyard; and every one should be encouraged to lend his aid, whether it may be more or less valuable. I have also, perhaps, to apologize for using illustrations which may appear to some of a nature not very relevant, and not suited to such an inquiry as this; and particularly for reference, on some occasions, to a class of writers not generally ranked among philosophers—I mean the poets. But, in truth, I regard these, as has often been done in a critical, though seldom in a philosophical view, as our great masters in the science of human nature. I consider that it is in their productions, more than in the elaborate works of philosophers and metaphysicians (who generally write for the purpose of supporting a system) that we are to look for a just delineation of human thoughts and feelings, and a true and living picture of man, in his just lineaments and proportions. It is there we find him represented as he really exists, manifesting his feelings and energies as they shew themselves under all the trials of exertion and suffering to which he is exposed in the collisions of the world, and standing before us in all his strength and in all his weakness.

The propensities mentioned by phrenologists may be properly enough distinguished into three orders—those which

excite to action—those which restrain from it—and those which retain us in a fixed and permanent course of conduct. Of the first kind, are the lowest propensities of all, the organs of which lie along the base of the brain—Amativeness, Combativeness, Destructiveness, Constructiveness, and Acquisitiveness. Of the second class are Secretiveness and Cautiousness. And of the third, Philoprogenitiveness, Adhesiveness, and, No. 3., formerly termed Inhabitiveness, but now among us designated Concentrativeness. The characteristic of the first class seems to be ardour of pursuit, modified with respect to the object to which they are specifically directed:—ardour, eagerness, keenness,—to enjoy, to struggle and overcome, to destroy, to construct, to acquire, —seem to include the most of these strong desires which impel us originally to action, and which lie at the foundation of the human character.

These seem to be the impelling forces which put the machinery in motion. They act as the *steam*, while the restraining powers are the *condensers* and *safety-valves*; and the third class, the affections, may be likened to the *fly*, which keeps the motion equable and steady: and, if we are inclined to carry the parallel farther, we might say that those sentiments and intellectual faculties which ultimately serve to regulate and direct the conduct, may be compared to that ulterior complication of wheels and *machinery* which enables a blind physical force to accomplish all those wonders which we see it actually perform; though, in either case, all this combination of powers could do nothing, without an infusion of that intelligent mind which originally planned, and must throughout animate and inspire the whole.

To observe the lower propensities aright, we should look first at their effects in the lower animals, where they are not, at least not so perfectly as in man, controlled and modified

by powers of a superior kind. In the brutes, they frequently appear single and unrestrained; and, while any of them is naturally predominant, or for the time in a state of activity, they rush to its gratification with a fury which disregards all consequences.

The direct impulse of any of these propensities, unregulated by higher powers, may be compared to the effects of simple forces in mechanics, by which a body is impelled to move in a certain direction and in a straight line. In this case, the motion produced affords an accurate measure of the force applied, both in its direction and in its power. The effect of such propensities in the human character, on the other hand, where their energy is controlled and modified by higher feelings, may be likened to that produced by a combination of forces, where a body, instead of moving in a direct line, in the direction and with the velocity impressed by the original moving power, is drawn aside, and made to move in a diagonal, or in a curve, by the influence of some other power acting along with it. In this case, the motion produced is not a measure either of the one power or the other; and their relative nature and degrees of force can only be discovered by careful analysis and patient calculation.

I shall proceed, without farther preface, to the consideration of

Combativeness.

There is no quality whatever in which men differ more, than this of Combativeness. While some individuals are so devoid of it, as to shrink from the most trifling opposition, and would almost run away from a Barbary hen, "if "her feathers turn back with any shew of resistance;" there are others who are never so happy as when engaged in a vigorous contest, such as to employ to the ut-

most their whole powers and means, both offensive and defensive. There is hardly a greater difference between the most gentle of animals and the most savage,—between a lamb, for instance, and a lion, than there is between one individual of our species and another, in respect of this propensity.

It is impossible to account for such a prodigious diversity as this in any way but one. No differences of education, or of habit, or any of the circumstances commonly supposed to affect or modify the character of individuals, could ever produce so complete an opposition of tastes and powers, if men were originally formed alike; for this is not a variety merely, but a total and entire opposition. In the inferior animals, education and habit may be employed, to modify to a certain degree their original propensities; but no force of education or habit, will ever root out one strong propensity and implant its opposite. No education will make the tame and docile tribes learn the manners of the wild and ferocious. Game cocks, who have a natural propensity to fight, may be taught to fight in a particular way; but it is quite impossible to teach pigeons or hares to fight with the ardour of game-cocks.

When we are asked, what is the reason of this extreme difference in the habits of animals? We answer, quite correctly, that it is their nature; that one has naturally and originally implanted in it an instinctive propensity or power, which another has not. When we find as great a difference in our own species, why should we give a different answer in their case? Why should we attribute to education or habit, effects greater than education or habit was ever known to produce in any individual instance?

If any instances could be shewn, where native original propensities, perfectly well marked and ascertained, were not only modified and altered, but the opposite propensity very

strongly induced, by education and habit; then it might be correct and philosophical to conclude, that these will account for all characteristic differences. If it were a common or not unusual occurrence, to find a man, originally of a soft and yielding disposition, utterly averse from every kind of contention, by being placed in certain circumstances, and under a particular training, become bold, active and spirited, delighting in danger and fatigue; or if, by a contrary mode of treatment, a stirring, fiery spirit, could be smoothed and softened down to the gentle disposition of a girl,—such instances would be facts which would furnish the grounds of legitimate argument. But it may be confidently said, that no such instances can be produced, or ever existed; and in the absence of all such, we have only left us to conclude, that the differences we observe in the tempers and dispositions of individuals in this respect, arise from an original difference in the constitution of their minds.

These observations may, in some measure, apply to all the propensities; but they are not more conspicuously true with regard to any, than this of Combativeness. This propensity is not confined to the mere act of fighting, that being only one of the modes in which it manifests itself. It seems to be the *primum mobile* of our constitution; the main spring which sets the other wheels of the machinery in motion. Its essence seems to be a sort of restlessness,—an impatience of ease,—an abhorrence of a state of inactivity. By itself it is a blind impulse, delighting in opposition for its own sake,—a restless spirit of contention, without end or object,—but under the direction of higher powers, it gives boldness and force to the character, and enables these to act with energy and effect. All the propensities are not merely propensities, but powers; and this of combativeness is eminently so. It not only gives the de-

sire to contend, but the power of contending; and without this as an active principle, no other motive can induce the same species of exertion.

I have said that it does not show itself in fighting only. In all cases where we have difficulties to encounter, where a severe struggle is necessary to command success, this power is of eminent use; and nothing can supply or make up for it, if it is wanting. In the ancient games, it was the same internal impulse which strained to the utmost the speed of the racer, and gave force to the arms which wielded the disc or the cestus. No doubt, the love of approbation may be a powerful auxiliary, by producing the desire to excel; and firmness may supply the passive principle of resistance and determination not to yield; but these are auxiliaries only; and, in the actual struggle, they can do nothing without the power of combativeness, and that in large measure.

When this power is too energetic, or not properly controlled by other powers, it renders a man a nuisance to society, or fit only for savage life: but when it is duly balanced, and kept in subordination to the superior powers, it is of eminent use, and a necessary ingredient in a manly character. It is of use not merely in the contests of the field, but in the collisions of civil life, whenever our views happen to clash with, or be opposed to, those of others. It may display itself in the bloodless contests of the bar or the senate; and even among the softer sex, in the rivalries of the boudoir and the ball-room, no less than in the arena, or in the field of battle. In every contest, he who is endowed with this power dashes through obstacles, and struggles on to the last; while he who has it not is easily discomfited, and with every desire to get forward, feels himself worsted, baffled and beat down in every quarter, by

those more highly endowed with combativeness than himself.

This propensity sometimes manifests itself very strongly, where there is no opportunity or pretext for any serious or actual opposition. There are some men in whom it appears, in the course of the lightest or most amicable conversation. Such men are your great arguers. The spirit of contention and opposition is so strong in them, that they cannot prevail upon themselves to assent to the simplest proposition. There are men who make a point of contradicting almost every thing that is said; who, whatever opinion is broached, are sure to take the opposite,

"And even tho' vanquished, they can argue still."

Such persons cannot endure to have their opinions assented to. If you are convinced by their arguments, they will go over to the opinion you have left,

"Confute, change sides, and still confute."

The character of "my Father" in Tristram Shandy, is an exquisite delineation of a person of this kind, and the humour is kept up by making it one of his greatest annoyances, that "my mother" will, by no means, be brought on any occasion to contradict him, or to dispute with him; but invariably assents to every thing he says, so that their conversation never proceeds beyond a third sentence,—the proposition,—the reply,—and the rejoinder.

They who satirise the softer sex, represent, with what truth need not be said, this spirit of contradiction as sometimes exceedingly strong in them. It would be injustice surely to say, that this is frequently the case in those of better rank and education,—but among the children of nature, whose original qualities, good and bad, are allowed to shoot up unrestrained, it unfortunately occurs too often.

And every one must have seen among the lower ranks, indecent brawls occur in families, which can only proceed from a large share of combativeness in the weaker vessel. When combined with destructiveness, it constitutes what is generally called a scold; and is apt to produce a series of open brawling and loud threatening looks and language, which render a woman the terror, not of her own family only, but of a neighbourhood.

But combativeness does not shew itself in perfection, when combined with any other principle of action. There are many who may be ready enough to strike, "when they "see occasion,"—but true combativeness shews itself in prompting to strike, whether there be occasion or no. This appears nowhere better exemplified at the present day, than in the character of the low Irish. The Irishman seems to exhibit the very *beau ideal* of combativeness. It would be interesting to know if this is accompanied by a corresponding development. There is in this strange race a mixture of ferocity and fun, which seems to be inexplicable on any other principles than those of phrenology. It is explained at once by supposing, that the organs of combativeness and wit exist in them, in a state both of high development. If this shall prove not to be the case, on an attentive examination of the Hibernian sinciput and occiput, it will in no small degree contribute to shake my belief in the doctrines of phrenology.

The Irish, of the lower ranks, it is well known, delight in fighting for its own sake. A blow is with them a smart repartee, and fighting an agreeable exercise, to keep the blood in circulation. On all occasions which bring the people together in any considerable numbers, whatever may be the original ostensible purpose or pretence, they can never separate without the most decided manifestations of this propensity. I speak not here of their almost perpetual dis-

turbances, riots, rebellions and murders, which manifest no small portion of destructiveness; but of their more peaceable and orderly meetings, whether for the purposes of business or pleasure.

Sir John Carr, in his "Stranger in Ireland," informs us, that there is not a more deadly symptom of the state of that country, than a cessation from this favourite amusement. The rebellions in Ireland, he observes, like the hurricanes in the West Indies, have always been preceded by a calm: so much so, that shortly after the year 1798, upon a gentleman who lived in a town, where a great fair was holding, and who knew the Irish character well, being asked how the people seemed disposed at the fair,—he replied, "all was peace and quiet; for he had left them all "fighting."

The same lively tourist relates that an Irish gentleman, who was travelling abroad, happened, on entering a village in the south of France, to see an irregular skirmish among the inhabitants, such as is termed a *battle royal*: he immediately jumped out of his carriage, and joined one of the parties; and the side he espoused happening to be worsted, he received some hard knocks; but being conveyed back to his vehicle, with some pretty severe contusions on the head and limbs, instead of lamenting these, he declared it was "the first bit of fun he had had since he left little "Ireland."

The above is perhaps not exactly true in all its circumstances; but the very fact of such a story being invented, if it is an invention, marks the character of the nation to whom it is applied.

The description of an Irish feast, translated from an old song, in the language of that country, by Swift, shews that this part of the national character was, a century ago, nearly what it is now.

" Good Lord, what a sight,
" After all their good cheer,
" For people to fight
" In the midst of their beer.
" They rise from their feast,
" *And hot are their brains ;*
" A cubit, at least,
" Are the length of their skeans.
" What stabs, and what cuts,
" What clattering of sticks
" What strokes on the guts,
" What bastings and kicks,
" With cudgels of oak,
" Well hardened in flame,
" An hundred heads broke,
" An hundred struck lame."

The concluding verse,

" Come down with that beam,
" If cudgels are scarce."

evinces an extent of the combative propensity truly Hibernian.

But at a period still more remote, it appears from authentic documents, that our own ancestors fell little short, in this particular, of the modern Irish. The following verses from a poem, which is acknowledged to contain a correct and admirably graphic description of the manners prevalent in that age, will shew what was very generally the conclusion of a merry meeting in the days of our forefathers. It will be observed that the fighting is introduced quite as a matter of course, and without any reason whatever being assigned for its commencement.

" Wi' forkis and flailis they lent great flappis,
" An' flang togidder like friggis;
" Wi' bougaris of barnis they beft blew cappis,
" While they of bairnis maid briggis.

" *The reird raise rudely wi' the rappis,*
" *While rungis were laid on riggis ;*
" The wiffis cam furth wi' cries and clappis,
" See whare my liking liggis
" Fu low
" At Christis Kirke on the Greene that daye."

" The miller was o' manly mak,
" To meit him was nae mowis;
" There durst nae tensome there him tak,
" Sae noyted he their powis :
" The bushement hail about him brak,
" And bikkerit him wi' bowis;
" Syne traiterously behynd his backe,
" They hewit him on the houghis
" Behind,
" At Christis Kirke on the Greene that daye.

" Twa that were herdsmen o' the herd,
" On ither ran like rammis,
" They followed, seeming right unfeared,
" Beat on wi' barrow trammis;
" But whan their gabbis they were ungeared,
" They gat upon the gammis ;
' Quhile bludie barkenit was their baird,
" As they had worreit lammis
' Maist lyke,
" At Christis Kirke on the Greene that daye."

That all this warlike proceeding was merely an ebullition of the combative propensity, without any mixture of the destructive, appears from this, that no fatal casualty is recorded; and it seems still more apparent, from the following account of the conclusion of the fray.

" Quhen thai had beirit lyke baitet bullis,
" An brain wode brynt in bailis;
" Thai wer als meik as ony mulis;
" That mangit were wi maillis;

" For faintnesse thae forfoughten fulis,
" Fell down like flaughterit faillis;
" Freshe men cam in, and hailit the dulis,
" And dang them down in dalis
" Bedeen
" At Christis Kirk on the Greene that daye."

It is not quite useless to trace these symptoms of national character and manners. What our forefathers were two or three hundred years ago, the Irish peasantry seem to be now. We know the improvement that has taken place amongst us since that period, and we know the means by which that improvement has been effected; and if the same means were used with Ireland, we may hope that the same effects would follow.

Destructiveness

Goes a step farther than Combativeness, and implies a desire, not of merely overcoming our adversary, but of destroying him, and putting him to death. Be it remembered, that, in speaking of this, as of all the lower propensities, they are to be considered first in their direct tendency merely, in reference to their end and aim, when altogether unrestrained. In man they are never entirely so; as man is furnished with powers of a different kind, which were given him to govern and control them. But, in the brutes, these propensities, and this one of destructiveness among others, are often seen to rage without check or limitation,—without either pity or remorse. A blind fury animates them, inciting them to kill and destroy every living thing that comes in their way. Some even of the savage tribes, such as the lion, appear to have some sparks of generosity in their nature, and do not kill, except when pressed by hunger; but others, as the tiger, take delight in destroying

life, for its own sake, and without any object but that of killing, spring on the defenceless passenger, or the harmless bullock,—plunge their remorseless fangs into his bowels, and, as the life-blood drains away, growl with a horrid delight over the object of their butchery.

In man, this propensity is generally restrained and prevented from reaching its direct object, so far, at least, as regards the persons and lives of our fellow-men. But, where the restraints of principle, and the higher feelings are not supposed to apply, those in whom the propensity is strong, indulge themselves in committing havoc among the inferior tribes. The sportsman who boasts of killing in one day ten fat bucks, or forty or fifty brace of unoffending birds, would perhaps be shocked, were he told that the pleasure he takes in these amusements, or *sports*, as he calls them, proceeds from his possessing a large portion of that quality which renders the tiger the most ferocious of animals. The fact is nevertheless so; the pleasure has its first origin undoubtedly in Destructiveness.

The avidity also with which all ranks crowd to executions, proceeds chiefly from this propensity; although the love of effect, arising from Wonder and some other faculties, operates along with it in prompting individuals to be present at such spectacles. We have too much humanity ourselves to put a man to death. But if a man is to be killed, we have no objection to witness the fact, or, if I may be allowed to say so, to enjoy the pleasure of seeing it performed. That there is with many a pleasure accompanying such spectacles cannot be doubted; and this pleasure is so great, that, to enjoy it, they are willing to do violence to all their other feelings. Were Destructiveness wanting, and Benevolence favourably developed in persons present at an execution, they would be horrified, not delighted, by such a scene.

Those who have much Combativeness and Destructiveness will delight in reading histories of battles, sieges, and wars. The love which the common people have for accounts of bloody murders, arises from the same propensity.

The games of the Romans, where hundreds of human beings were exposed to the fury of wild beasts, or obliged to fight with and destroy one another, evince a people in whom this propensity must have been remarkably strong. It is not wonderful that such a people should have been almost constantly engaged in wars, or that they should have succeeded in subjugating all other nations; and, it may be presumed, that there existed among them many a CALIGULA or NERO, who never was raised to the purple.

Were not this propensity to be duly restrained, the earth would, as in the days before the flood, be indeed "filled with violence;" but it is restrained both by resistance from without, and by Cautiousness, Benevolence, and other superior sentiments within. It proceeds to the last extremity of murder, only when these restraints are too weak, or when they are overborne by a sudden access of the destructive propensity, too strong to be resisted.

The form in which it manifests itself when opposed by obstacles from without, and when not duly restrained by other sentiments within, seems to be the passion of *anger*. It excites to loud threatening, which has the effect to put upon their guard those against whom it is directed. It gives the tendency to curse, which is the true manifestation of this propensity in words. It imparts a bitterness and force to every kind of vituperation and sarcasm.

It is a mistake to suppose that this is always an evil or a mischievous propensity. When combined with benevolence or a strong sense of justice, it gives rise to a virtuous indignation, some degree of which is absolutely necessary to the true dignity of man. Nothing is more necessary, or

more becoming a perfectly virtuous character, than a just degree of severity and anger against every species of vice, fraud, deceit, and cruelty. When we witness any signal instance of these, not to be angry, is a proof of a mean and contemptible spirit. "Be angry and sin not," is a precept founded upon this part of our constitution, and this anger, so just and commendable, will probably be found to have its source in the power of Destructiveness.

It is this faculty, as it appears to me, which gives to the character its greatest energy and power. It lends a peculiar force to the accents of command. Every command so enforced, implies in it a threat: "Do thus, or thus, as "ye shall answer." It is an intimation of the will of the speaker, coupled with the farther intimation expressed or implied, that disobedience will be attended with fatal or inconvenient consequences. This power, accordingly, is highly necessary to the chiefs of savage or uncivilized nations, and even among a more refined people to the commanders of armies. Robert Bruce in former days, and Buonaparte in our own, had this organ in large development.

Power is manifested, not so much in actually destroying, as in exhibiting an intention to destroy, if our will is not obeyed. This is the first idea of power in the despotic, which is the most simple, and next to the patriarchal, the most ancient form of government. Laws are a refinement of more modern growth. The despot knows no law but his own capricious will, nor any means of enforcing his commands but the immediate terror of the axe and the bowstring. But, although under more due regulations in a limited government, the principle of all power and all command is the same. It is this which gives its force to all military and naval discipline. The articles of war are known to denounce death to all who shall disobey,

oppose, or evade the orders of their officers or superiors. In civil life, the sanctions which preserve the public order and tranquillity, differ from the above only in this, that the rules to be obeyed, proceed not from the will of an individual, but from the equal voice of the laws which apply to all; and the punishment which follows their infringement is not inflicted by the party aggrieved, but by a public magistrate, after due investigation and form of trial.

But, in all states of society, there are many acts to which the laws and the voice of the public magistrate do not, and cannot apply. We are often called upon to defend our persons, our properties, and our rights, from fraud and violence, as we best can. For doing this with effect, the power of Destructiveness is highly necessary, though it is not always necessary even then to give it full scope, or carry it the length of extinguishing life. It requires much firmness, and a complete possession of all our powers, to know how far forbearance should be carried, and when a just severity becomes necessary and proper. A person, with large Destructiveness, and deficient controlling power, will, from fear, or for some trifling inadequate motive, destroy life. A man of superior intellect knows his interest better. Conscious of the tendency, he restrains it in its last and most fatal effects; because it produces more desirable ends in its more moderated exercise. The pistol which, when discharged, can shoot only one man, may, when held in a threatening position, overawe a hundred. So it is with the man, whose passion, though ready to burst forth, is under controul. He commands, and his commands are obeyed; because it is known there is that about him which brooks no dallying. Thus *Hamlet*, when attacked by *Laertes*, before he proceeds to repel force by force, calmly remonstrates with his antagonist,

" I pri' thee, take thy fingers from my throat,
" For tho' I am not splenetic and rash,
" Yet have I in me *something dangerous*,
" Which let thy wisdom fear."

It frequently happens, that those who possess this power in most perfection, do, in a personal contest, exhibit much more coolness, and a greater reluctance to proceed to extremities, than those who have not half the original power, but whose power, such as it is, is, from circumstances, more in a state of excitation, or less under the control of the restraining faculties. In the following passages from *Othello*, it will be seen, that the brave and redoubted chief,—the scourge of the Ottomites,—the prop and bulwark of the Venetian name,—who had faced and discomfited thousands of his countries' enemies,—he, in short, who, of all the persons represented, must be supposed to have possessed this power in largest measure, is, throughout, the most cool, and the most averse to use, or to allow to be used, any actual violence. In the first scene, the old, decrepid, and infirm *Brabantio*, is clamorous, fierce, and boastful; while *Othello*, in the full consciousness of his own superiority and safety, receives him with a calmness almost indicating contempt.

" *Rodrigo.* Signior, it is the Moor.
" *Brab.* Down with him, Thief.
" *Oth.* Keep up your bright swords, for the dew will rust them.
" Good Signior, you shall more command with years
" Than with your weapons."

Swords being raised on both sides, *Othello* calls out with the tone of one accustomed to command,

" Hold your hands—
" Both you of my inclining and the rest,
" Were it my cue to fight, I should have known it
" Without a prompter."

In the second act, he shows the same anxiety to preserve the peace, which is disturbed by the quarrelling of his offi-

cers in Cyprus; and the manner in which he does it, characterises his destructive energy no less, than if he had been the foremost in taking a part in it.

" For Christian shame, put by this barbarous brawl,
" He that stirs next, to carve for his own rage,
" Holds his soul light—*he dies* upon his motion."

Afterwards, when his repeated interrogatories cannot extract from the actors in it, an account how the disturbance began, his anger begins to rise indeed.

" Now, by Heaven,
" My *blood* begins my *safer guides* to rule,
" And passion, having my best judgment collied,
" Assays to lead the way: *If I once stir,*
" *Or do but lift this arm, the best of you*
" *Shall sink in my rebuke.* Give me to know
" How this foul rout began?—Who set it on?
" And he that is approved in the offence,
" Tho' he be twinned with me, both at a birth,
" Shall lose me.—What, in a town of war,
" Yet wild, the peoples' hearts brimful of fear,
" To manage private and domestic quarrel
" In night, and in the court and guard of safety,
" 'Tis monstrous!"

There is something in the gesture, in the looks, and, above all, in the tone of voice, of one who possesses this power, which, in less energetic minds, inspires an instinctive fear, and induces an involuntary obedience. The feeling to which it addresses itself is Cautiousness. When in the state of greatest energy, its effect is irresistible. It is not mere loudness; for that may be assumed by any one who possesses the requisite strength of lungs. It is not the mere appearance of anger; for anger, in an unenergetic mind, is only an object of ridicule. But when these indications are exhibited by a powerful mind, there is in them an indefinable something, which awes inferior spirits, and reduces them to obey, in spite of themselves. The most detailed portrait of the terrible being which man may be-

come, when destructiveness is combined with superior intellect, is presented to us in the *Achilles* of HOMER. But none of his actual exploits in battle, not even his resistless rage, where he stands alone, and is victorious over a host of foes, though the gods themselves mingle against him in the fight, conveys such an idea of the destructive energy of his character, as his appearance, unarmed and naked on the Grecian battlements, when he goes to survey the contest, for the dead body of his friend *Patroclus;* and when he raises that shout, which startles and appals the contending multitudes, and causes them to drop their arms, and pause in the midst of the combat. *Stentor* might have shouted as loud or louder, without producing this, or any effect at all. No doubt, HOMER says, that Minerva threw her ægis over the head of her favourite, and swelled his shout with her own voice; but this is merely HOMER's way of expressing to us the terrible energy of mind which gave its force to the voice and lightning looks of the hero.

This organ is said to be generally larger in men than in women; and it is remarked, that the male head is for the most part shorter and broader, the female longer and narrower. Now, as this organ is placed in the lateral parts of the head, it will at once be seen that this conformation indicates a greater development of it in the male head than in the female. Of course there are exceptions; but, taking this as the general case, it appears to correspond with the difference of character, particularly if we are right in supposing, that a superior development of this power communicates to the whole mind a superior energy, and that it gives the power of enforcing *command*, or of overruling the will of others to our purposes, seeing that it is in general the man's province to command, and the woman's to obey.

It will be seen, I think, from the above, that this is a most important power, not so much in its direct tendency,

as in the use which it serves, when under proper controul. It may be compared to the element of fire, which is said to be a good servant, but a bad master. It is not, as is vulgarly supposed, neutralized and destroyed, by being joined to a large portion of benevolence, and other controlling principles; it is only turned by them to a valuable and useful purpose. A weak mind, with a large Destructiveness, may be compared to a vessel which bears too much sail in proportion to its ballast, and which is apt to be overset by every sudden squall, burying its unfortunate owners in the deep; but when under the government of a firm and enlarged intellect, and proper principles of conduct, it acts as the wind upon the same vessel, properly trimmed and steered, impelling it to whatever point the helmsman desires, and even sometimes in a course almost directly contrary to that of the original moving impulse.

Of Secretiveness.

This faculty is exceedingly important; but the analysis of its functions is attended with peculiar difficulty. In the following discussions, I shall carefully endeavour to distinguish those points, which rest on actual observations of Nature, and those general views, which are merely *inferred* from the facts observed, and which seem to elucidate the nature of the faculty. The latter, I wish it to be distinctly understood, are mere inferences or conjectures, which at present appear to myself to be correct, or at least probable, but which farther reflection, or a more extended observation, may make it necessary to alter or modify.

This power is of a very different kind from the two which we have been considering. It is the office of these to incite to vigorous action, and their manifestations are open and undisguised. There are other powers, as we have seen, which serve to restrain and moderate these pro-

pensities, and to direct them towards proper objects. Secretiveness is, in some respects, a power of the latter kind. It enables us to repress or regulate the outward manifestation of the other powers,—the outward expression of those desires and feelings which excite us to action,—*until* we reach the point towards which their impulses would lead us. When we are excited by the propensity which we have been last considering, to perform an act of destruction,—Secretiveness does not indeed diminish our *desire* to destroy; but it enables us to suppress the outward manifestations of that desire. It restrains the expression of anger, until that which is the object of it comes to be so within our power, that we are enabled to inflict the meditated blow without hindrance or opposition.

As the very notion of concealing any thing, implies that there are sentient and intelligent beings from whom it may be concealed, this power has necessarily a double aspect, and has a regard to the beings *from whom*, and the matter *of which*, concealment is desired. A desire of concealment can have no place, when we are alone, or surrounded merely by inanimate objects; but place us among our fellow men, and the desire instantly has room to operate. It is farther necessary, for the purposes of concealment, that we have some insight into the views, the feelings, and the purposes of the beings around us. Without this, there could be no definite object in concealment. The cat knows that the mouse is afraid when he sees her, and therefore she hides herself till she can spring out upon him. The hunter studies the habits of the animals he pursues,—that he may lay his snares, and shape his proceedings accordingly. So it is in human life: those who are secret and close in what regards themselves, are vigilant in watching others, so as to discover, if they can, their sentiments and purposes. Both these desires, that of discovering the feelings and purposes of others, and conceal-

ing our own, result from, and are dependent on, the activity of this organ. The desire is, in either case, accompanied, to a certain extent, with a corresponding power; although, in order to attain perfection in either, other faculties, both of intellect and feeling, are undoubtedly necessary.

The first point, then, which we shall consider, is the endeavour which this propensity leads to, of penetrating into the thoughts and feelings of others. As we have said that this endeavour is accompanied with a corresponding power, it is proper to explain the nature of that power, and how far it depends upon the faculty we are now considering. There is no doubt, that any desire, when strong, incites to action all the powers of the mind, which can any way assist in gratifying it. And this desire of discovering the feelings and the purposes of others, which we suppose to originate in Secretiveness, must necessarily excite other powers, particularly the knowing and reflecting faculties, to exert themselves in procuring the desired information. But these are of themselves not sufficient in many cases, without the aid which is furnished by Secretiveness itself, consisting in a certain instinctive *tact*, which assists us in discovering and penetrating to that which is intended to be concealed from us.

All the powers of the mind, both of intellect and feeling, possess a tact of their own, and are fitted in some way to read the natural language, by which the feelings of others are expressed. Every power * reads the natural lan-

* In describing the faculties, it is almost impossible to avoid speaking of them as separate agents. It is proper to warn the reader, that it is by no means intended to convey this meaning, as it is always understood that the mind is one and indivisible, and that it is merely enabled to manifest certain powers and qualities, by means of the organs of the brain. To express ourselves, however, in all cases, so as correctly to convey this idea, would require a degree of circumlocution, which would be altogether intole-

guage of those feelings which address themselves to it, or by which it is most affected. The amative propensity is soonest discerned by those who possess the same propensity themselves in a considerable degree. Cautiousness soonest discerns the signs of anger, and of those other feelings which threaten danger. Those who are highly endowed with kindness and benevolence, most easily read the characters of kindness and benevolence in others; and those most eager for applause, are most acutely sensible of any appearance of disapprobation.

The knowing and reflecting faculties enable us to estimate the degree of these powers in others, and to form a judgment of their sense and understanding. But supposing all these faculties to be possessed in perfection, there is still something more wanted, to enable us to dive into the real characters and feelings of others, seeing that these are scarcely ever laid perfectly and entirely open before us, but always with more or less of disguise or concealment. All have this propensity in a certain degree. There are none who do not conceal, or endeavour to conceal, some part of what passes in their minds. The mind can no more be without a covering than the body; and a veil, more or less opaque, is equally proper for both. Now, as Secretiveness gives the desire of concealing our own thoughts and feelings, so it also gives the desire of discovering the thoughts and feelings of others; and to this extent it gives the power of doing so, that it reads in them the natural language or outward expression by which this desire of concealment manifests itself. There is a *manner* which is peculiar to Secretiveness;—an appearance of closeness and reserve, which, even in concealing, betrays to us that

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rable. This notice is sufficient once for all, and the reader may easily apply it in any case, when the organs or faculties are spoken of as if they exercised a separate agency.

something is concealed. In spite of every art, there is something in the conduct where this exists, different from the open straight-forward course of plain undisguised truth; and be these indications as faint as they may, those who possess the power strongly themselves, will not fail to mark them, and will penetrate, by means of them, through the thickest disguises.

It may be hardly necessary to mention here, that, although Secretiveness gives in some respect the power of penetrating into character, by a sort of instinctive tact, all who possess a large Secretiveness, are not equally capable of judging of the characters of others. This propensity gives the desire merely; and only so far the power, that it reads the natural language of the same propensity in others. But, in order to give a perfect penetration into character, all the other powers of intellect and feeling are necessary, as they all read in some degree the natural language of the same powers and feelings in others; and the degree and kind of penetration which is possessed, will depend upon the development of powers in the individual in other respects. In general, it may be remarked, that an individual cannot form any just conception of a character which is much superior in any respect to his own; and that though a large Secretiveness may enable him to unravel the labyrinths of deceit, and to penetrate the darkest recesses of concealment, it gives no insight whatever into the higher feelings and sentiments. It may even happen, that those who are endowed with large Secretiveness, but with a slender portion of intellect and sentiment, will overshoot the mark in their endeavours to penetrate the designs of others. For, though they may be perfectly at home with those who are as secret as themselves, and be able to fathom all their mysteries, they will be entirely out in their calculations, when they meet with a person who uses no disguise. They will never believe but that there is some deep design under

every thing he says and does; and hence, the more open and unreserved he is in his proceedings, the more they will be puzzled, and the more difficult they will find it to understand him.

This corresponds exactly with all that the Phrenologists have discovered of the functions of Secretiveness. They have found, that, when it is too predominant in the character,—when it is not properly balanced by the superior powers,—it leads to *cunning*, which comprehends all that we have been endeavouring to explain; the instinctive propensity to penetrate into the purposes and feelings of others, and to disguise our own *. I call it instinctive propensity, for it is not an intellectual power, and acts by instinct, and not by reason. The cunning, we know, often deceive themselves in their endeavours to overreach others. "There is," says Lord Bacon, "a great difference between a cun-
"ning man and a wise man, not only in point of honesty,
"but in point of ability. There be who can pack the
'cards, and yet cannot play well; so there are some that
"are good in canvasses and factions, that are otherwise weak
"men. Again, it is one thing to understand persons, and
"another thing to understand matters; for many are per-
"fect in *mens' humours*, that are not greatly capable of
"the real part of business." The whole essay from which

* Since this Essay was sent to press, I have found a remarkable confirmation of some of the views above stated, in the writings of an author who will be allowed to be a good judge of human nature. In the novel of *Quentin Durward*, just published, the character of Louis XI., in whom Secretiveness seems to have been a predominant propensity, is represented so as to correspond, in the minutest point, with the account which is here given of it. In particular, it is mentioned, that the King, "like all astutious per-
"sons, was as desirous of looking into the hearts of others, as of concealing
"his own,"—an observation which is repeated several times, and upon which considerable stress is laid in the delineation of the character.

these remarks are taken, may serve as a study for those who would understand the true nature of cunning, and contains among the best illustrations that can be given of the manifestations of this propensity in the conduct.

Although this be an instinctive propensity, and in those who possess it in a strong degree, it acts independent of any other motive, it certainly is excited most powerfully where matters are to be agitated, which the party is conscious are of an improper or criminal nature. Setting conscientiousness out of the question, which, in such persons, may be supposed to have little influence, Cautiousness and the Love of Approbation unite with the native love of secrecy, in inducing them to use every art of concealment, and to put a veil of the thickest mystery over what is too monstrous to endure being looked on. Even when it is necessary, in the prosecution of criminal designs, to reveal them to others, it is done in the most cautious manner, and the intention rather hinted at by dark surmises, than openly spoken out and avowed. There is a scene in "King John," when that monarch wishes to induce one of his followers to murder the young and innocent Prince Arthur, where this is represented with the most consummate art. The passage has been often quoted; but it is so perfect a delineation of the very inmost soul of Secretiveness, that I cannot resist giving a part of it here. It is evident, that, throughout, the king is feeling the ground before him, and probing Hubert's mind, as if he would read his most secret thoughts; and that he does not venture on the most distant hint of his purpose, until he has ascertained, by his patient listening, and at last by his hearty avowal of zeal for his cause, that he is an apt, and will probably be a not over-scrupulous depositary of his secret. This corresponds with what we have said, that Secretiveness gives the desire to penetrate the thoughts of others, as well as to conceal our own.

" *K. John.* I had a thing to say, but let it go;
" The sun is in the heavens, and the proud day,
" Attended with the pleasures of the world,
" Is all too wanton, and too full of gauds
" To give me audience. If the midnight bell
" Did, with his iron tongue and brazen throat,
" Sound One unto the drowsy race of night;
" If this same were a church-yard, where we stood,
" And thou possessed with a thousand wrongs;—"
" Or, if that thou couldst see me without eyes;
" Hear me without thy ears; and make reply
" Without a tongue, using conceit alone;—
" Then, in despite of brooding watchful day,
" I would unto thy bosom pour my thoughts.
" But, Ah! I will not. Yet I love thee well.
" And, by my troth, I think, thou lov'st me well.

" *Hub.* So well, that, what you bid me undertake,
" Though that my death were adjunct to the act,
" By heaven, I'd do't.

" *K. John.* Do I not know thou wouldst?
" Good *Hubert*, *Hubert*, *Hubert* *, throw thine eye
" On yon young boy. I'll tell thee what, my friend,
" He is a very serpent in my way;
" And, wheresoe'er this foot of mine doth tread,
" He lies before me. Dost thou understand me?
" Thou art his keeper.

" *Hub.* And I will keep him so
" That he shall not offend your Majesty.
" *K. John.* Death.—
" *Hub.* My Lord!
" *K. John.* A grave.—
" *Hub.* He shall not live.
" *K. John.* Enough.—I could be merry now. Hubert I love thee
" Well. I'll not say what I intend for thee.
" Remember.

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* The hesitation shewn in the thrice repeating of Hubert's name, is inimitably fine. The King lingers on the brink of discovering his intention, and it is not till the third attempt that he musters courage to hint it.

But the love of secrecy is not confined to the hiding of criminal thoughts and desires. Those in whom the propensity is strong, love to make a mystery of every thing. There is in them a gratuitous desire of concealing even the most ordinary matter, though there should be nothing about it improper, or that they need in any respect to be ashamed of. The great and virtuous SAMUEL JOHNSON seems to have been beset with some degree of this weakness; as, notwithstanding the persevering curiosity of his admiring friend and biographer BOSWELL, there were some things in the philosopher's life and conversation, seemingly of very little importance, which he never was able to procure an account of; and he mentions that JOHNSON delighted in making a secret even of such an affair as his going out to dinner.

Lord Bacon says, " There be three degrees of this hiding and veiling of a man's self; the *first* closeness, reservation, and secrecy, when a man leaveth himself without observation, or without hold to be taken, what he is; the *second* dissimulation in the negative, when a man lets fall signs and arguments, that he is not that he is; and the *third* simulation in the affirmative, when a man industriously and expressly feigns and pretends to be that he is not. For the first of these, secrecy, it is indeed the virtue of a confessor,—and assuredly the secret man heareth many confessions, for who will open himself to a blab or babbler. But if a man be thought secret, it inviteth discovery, as the more close air sucketh in the more open." For the second, which is dissimulation, he observes, " it followeth many times upon secrecy by a necessity; so that he that will be secret must be a dissembler in some degree; for men are too cunning to suffer a man to keep an indifferent carriage between both, and to be secret, without swaying the ba-

" lance on either side. They will so beset a man with " questions and draw him on, and pick it out of him, that, " without an absurd silence, he must shew an inclination " one way; or if he do not, they will gather as much by " his silence as by his speech. As for equivocations or " eraculous speeches, they cannot hold out long; so that " no man can be secret, except he give himself a little " scope of dissimulation, which is, as it were, but the skirts " or train of secrecy.

" But for the third degree," says his Lordship, " which " is simulation and false profession, I hold it more cul- " pable and less politic, except it be in great and rare mat- " ters." What these great and rare matters are, in which Lord Bacon considers simulation to be politic and allowable, he has not condescended to tell us. Men who have been engaged in as great affairs as ever Bacon was, among whom we may reckon the great Sully, held a contrary doctrine, and maintained that no conduct could be truly politic and wise, which departed from the straight line of honesty and good faith. This we consider the safer, as well as the more correct doctrine; and we are inclined to think it holds in great matters not less than in small, or rather that, in the former, it is of the stronger and more indispensable obligations.

We mean not here, however, to write a moral essay, but to describe the functions of Secretiveness, which we are aware, when unrestrained by higher motives and conscientious considerations, leads to every species of lying and deceit, and by consequence to almost every kind of vice, the first step to which seems to be a love of concealment, and a disregard of truth. There would, no doubt, be a much greater restraint upon any evil propensity, were immediate detection invariably to follow the commission of what is wrong. The propensity to conceal, therefore, assists and

strengthens all the other evil propensities, and even though these may be originally not remarkably strong, if this is so, it may lead them to seek indulgence in an illegitimate way, unless restrained by some of the higher sentiments. Hence a large secretiveness, with a moderate portion of acquisitiveness, may lead a person to steal, more readily than a larger acquisitiveness, with a moderate secretiveness. Those unfortunate women, who abandon the virtue and modesty of their sex, are generally found to be quite regardless of truth. The closeness which is given by this faculty, and the idea which it inspires, that whatever is wrong *may* be concealed, seems to remove, in the first instance, the restraints which operate against crime,—and the barrier once broken down, one step leads to another, until the individual is lost to every feeling of shame and honour.

To tell a simple direct lie, does not seem to require any great endowment of secretiveness. Any child can for once do that; and sometimes in the very act of saying that which is not true, and which is meant no doubt to deceive, children often betray a great deficiency in this very faculty; and the covering of falsehood is so thin and transparent as to deceive nobody. It is greatly otherwise with those in whom this power, originally strong, has been improved by long practice in deceit. Such persons are sometimes able, by means of well connected tales, utterly devoid of truth, or only so far true as to give them an appearance of plausibility, to impose upon the most wary and incredulous. They seem to possess a power resembling that of the cuttle-fish, which, when attacked or pursued, throws out a liquid which so darkens the waters around it, that it can no longer be perceived. So it is with them, when their powers are put on the stretch to obtain some favourite object, or to escape the deserved punishment of their misdeeds; on which occasions they are sometimes able to weave around

them such a complicated tissue of falsehood, as to baffle the most skilful in their attempts to unravel or to disprove it. Instances of this occur in the course of judicial proceedings, which are sufficient to strike with amazement, any person who is not endued with a large portion of secretiveness, or whose propensities, of this kind, are under the command and controul of those better powers, which always ought to govern the conduct.

But Secretiveness does not always lead to vice. It only does so when there is a deficiency of the higher sentiments. If Conscientiousness is very strong, it will probably in all cases operate as a sufficient restraint; but even though it should not be more than moderate, what it wants in strength may be made up by some of the other sentiments, when properly cultivated. Love of Approbation is peculiarly valuable in this respect; and, when it has been properly directed, may serve to keep us right, in a great degree, without much assistance from Conscientiousness. This sentiment is found particularly efficacious in counteracting the evil tendencies of Secretiveness; and there is reason to think that it directs that power to a legitimate purpose, in a matter where we would hardly suspect it to have any concern.

It has been observed, in a great variety of instances, and may almost be taken as an ascertained fact, that all great actors—all who attain any eminence in the higher departments of the scenic Art, besides "Imitation," which is of course necessary to them, possess a very considerable endowment of Secretiveness. This is found not to be confined to actors, but farther observation has shewn that the same is the case with those who follow the imitative arts in general. It is the case, at least, with painters and sculptors. Observations are not yet sufficiently numerous to shew if it extends to poets and musicians, but analogy

would lead us to conclude that it may. In general, it is observed that Secretiveness is necessary in order to give the artist the talent of *expression.* Imitation seems to give the power of copying the externals, but Secretiveness is necessary to give a life and soul to the performance.

These are facts which, as they have been observed, must be admitted, whatever theory we adopt for the explanation of them. What follows is not given as the result of observation, but it has suggested itself to me as affording a probable explanation of the manner in which Secretiveness may produce the above effects. How far it is correct must be left to be decided by farther observations, and more mature considerations: but, at any rate, the views here suggested may be useful in leading those qualified to make observations, which may either affirm or refute them. In either case, the cause of truth will be equally served; and it is this, and not any vain desire of erecting a theory, which has induced me to follow out the speculation.

As the faculty of Secretiveness extends to every kind of false seeming, and gives the inclination not only of concealing "that we are," but also, when there is occasion, of feigning "that we are not," it is to be expected that, in its highest degree, it should include a power corresponding to that inclination, and ready to second it under all circumstances. It is necessary to those who would conceal their real sentiments, that they be able to refrain, not merely from the utterance of their thoughts, but also from the outward expression of their feelings, even the most acute, and the least generally under controul; and, as Lord Bacon remarks that we can hardly retain an entire reserve, without some dissimulation, so we can hardly, on all occasions, dissemble our real feelings and sentiments, without some degree of simulation, or putting on the outward seeming of feelings or sentiments of an opposite kind. In order, there-

fore, to the *perfection* of *concealment*, it is necessary that there be a power somewhere of holding the feelings, at least the outward expression of them, under the controul of the will,—a power which, if existing in sufficient strength, might enable a man to wear, as it were, a perpetual mask, and to shroud his proceedings and purposes in impenetrable mystery.

The degree to which this power is possessed, both of repressing and expressing at will, feelings of the most acute kind, is such as to strike those with astonishment who are not gifted in a similar way. When exerted in repressing feelings, it is assisted by firmness. Instances of this occur in soldiers and sailors who feign sickness in order to procure their discharge; or, to use the common expression, "sham Abram." When this is suspected, they are often subjected to a course of torture, which, in some cases, they bear with the most amazing constancy. Some years ago, an account was published of a soldier who pretended to have a locked jaw; and when, in order to rouse him from his apparent lethargy, pins were thrust into his flesh, or under his nails, his head was shaved, and a blister applied to the whole coronal surface, and various other plans were resorted to, sufficient, one would have thought, to have extorted symptoms of feeling, had any feeling of pain existed; yet he bore the whole without shrinking: and, when wearied out at last, his commanding officer discharged him, and delivered him to his friends, he was found, the week following, in perfect health, assisting his father at his business as a carpenter. Some have been known who feigned themselves to be deaf and dumb, and who continued to carry on the deception for years, which could not have been done with success, without a command over the manifestations of the feelings, constantly exerted, of the most wonderful kind. Others have been known to gain a comfortable livelihood by star-

ving themselves, or rather by pretending an inability to take food. Various other instances might be mentioned, where the strongest feelings of our nature have been repressed for an incredible length of time, by artful and wicked impostors. In all these cases, there is little doubt but that the power of repressing the outward indication of feeling is given by *Secretiveness*, and that *Firmness* gives perseverance, and enables the party to prosecute his deception for a length of time.

But imposture goes often much farther than this; and those who wish to deceive us, are able not merely to repress the most acute feelings, but to assume others, or rather to work up and excite their latent feelings to action, so as to put on any appearance of passion or suffering which may happen to suit their purpose. It would seem that the desire of deceiving which this propensity gives,—the *conatus* or endeavour to put on the appearance of feigned feelings, is attended, when sufficiently strong, with a corresponding power of doing so. This is shewn by impostors, in their voluntarily throwing themselves into fits, which they sometimes do, in order to extort the compassion of the benevolent, although the power has often been abused for purposes of a much more detestible kind.

But there can be no doubt that the power to which we attribute much of this kind of imposture, may be possessed and exercised in an eminent degree, without being made subservient to any improper purposes. In fact, we consider that it is this power which gives the talent of *personation* or acting. It is obviously necessary to the perfection of this art, that the feelings, at least the outward expression of them, be under the controul of the will. There is nothing in acting, at which we are more disposed to wonder, than that actors should be able, so easily, to weep when they are not grieved, and to laugh when they are not mer-

ry. It is not habit alone that gives this power; for many possess it naturally, without any study, and others are incapable of acquiring it, after many years hard application. It depends, in truth, upon a special faculty, which, if nature has denied, no effort of study or application will be able to confer; and that special faculty we conceive to be Secretiveness. The organ of this power is found large in all great actors; but in order to direct it to the purposes of the scenic art, and to form what may be called a genius for acting, there are also required Imitation, and Ideality, aided by Love of Approbation. Secretiveness, however, is an indispensable requisite, as it consists with the observations of all phrenologists, that, without this power, the actor is incapable of giving expression to what he utters, or of infusing into his performances the force and energy of passion. It need not be told how much actors differ in the degree in which they possess this talent, and to what a wonderful extent some of them also possess it. Whoever has witnessed the performance of the elder Mrs Siddons, in the days of her greatest glory,—who has seen her as Belvidera, led in among the conspirators, pale and trembling, and seemingly under all the influence of terror,—in the scene where she is delivered over by *Jaffier*, to these monsters, with a dagger, which is to be plunged into her heart, "if he should prove unworthy,"—her face instantly changing from the deadliest pale to the deepest crimson, and tears, not in scanty drops, but a copious flood of natural tears streaming down her cheeks,—who saw her convulsive struggles to escape to her husband, and heard her shrieks and cries as she is finally torn from him, must have been satisfied, that that woman possessed a power, the name or description of which was not to be found in all the writings of all the metaphysicians, from the days of Aristotle until now.

That I may not be misunderstood here, it is proper to state, that the wonderful phenomenon now referred to is not conceived to depend upon a single faculty. Secretiveness alone will never give the appearance of passion. The utmost effect which we attribute to it, is the power of commanding the expression of those feelings, of which the appropriate organs are possessed by the actor, in a state of sufficient development. It is not the "fiery Pegasus," but the rein with which we "turn and wind" him. Agreeably to this, it is found, that though Secretiveness be necessary to every great actor, actors will always succeed best in delineating those feelings which they possess themselves, in a state of the fullest development. Thus, when Secretiveness is equal, that actor will most eminently excel in representing the angry passions, who possesses a large Destructiveness; and the actress in whom Adhesiveness and Philoprogenitiveness are strong, will succeed best in scenes of tenderness and pathos. This talent is thus described, by one who well knew in what the perfection of acting consisted, though owing, perhaps, to a deficiency in this respect, he never could attain any eminence in it himself.

"Is it not monstrous, that this player here,
"But in a fiction, in a dream of passion,
"Could force his soul so to his own conceit,
"That from her working, all his visage wanned,
"Tears in his eyes, distraction in his aspect,
"A broken voice, and his whole function suiting
"With forms to his conceit?—And all for nothing!
"For Hecuba!—What's Hecuba to him?"

It may, perhaps, be thought, that the power which is now ascribed to Secretiveness, seems rather to encroach within what may be supposed to be the province of *Imitation;* and it is perhaps not easy to draw the line accurately between them, in consequence of this, that both are found to

be requisite to perfect acting. If we may be allowed to indulge in a conjecture, we would be inclined to suppose, that imitation enables the actor merely to assume the outward manner of another,—to copy the most minute particulars of his behaviour, gait, gesture, tone of voice, and pronunciation; and that it comes nearer, and probably includes the talent of mimicry, which may either be serious or ridiculous, according as it is united with, and operated upon by ideality or wit. But we conceive, that Secretiveness, when found in conjunction with the other requisite powers, enables the actor, not to imitate merely the *outward* appearances, but actually to excite to action the very inward feelings from which these appearances flow, as from their natural fountain. And hence it arises, that when the acting is perfect, it has not at all the appearance of imitation. We have all the conviction that the outward signs of emotion which the actor exhibits, proceed from real feeling; and it is this, and the sympathetic feelings which it excites in others, that gives him so much influence over the minds of his audience.

It is hardly possible to conceive the extent to which this power might be abused, or the effects which might follow from its abuse, if it were united in its fullest perfection, in real life, with a character which was under no restraint from conscientiousness, or any superior regulating principle. This power in the combination which we have supposed, would confer a capacity for the most transcendant villany and hypocrisy. This is represented as the prevailing characteristic of *Gloster*, in all the parts of his history, previous to his obtaining the crown; and he thus describes his own qualifications,

> "For I can smile and murder when I smile,
> "And cry content, to that which grieves my heart,
> "And suit my face to all occasions."

Women who possess this power, may exercise a prodigious influence over the other sex. Poets and satyrists who have observed this in some women, have erroneously thought it to be true of all, and have recorded that

"Women when they list can weep."

This I am convinced is not the fact; indeed, I have seen many women who are as little able to melt at will as men are: But with some this power certainly exists in rare perfection, as has indeed been the case in all ages. We are told that *Samson's* wife, whom he chose of the daughters of the Philistines, wept before him for seven days, until she drew from him the secret of his riddle,—which she immediately told again to the children of her people; and thus in all ages have artful and unprincipled women been able, by these weapons, with which nature has endowed them,—the artillery of sighs and tears,—alternate fits of rage and fondness,—scorn and caresses, to overcome all the boasted superior wisdom of man, and to turn and mould at their will those who permit themselves to come within the sphere of their wiles. It is easy for those who have not been tried to suppose it the extremity of weakness and stupidity in men to allow themselves to be so gulled;—but we have it upon record, that no wisdom or strength of mind can enable a man to resist the allurements of a woman he loves; even when his better judgment shews him that she is drawing him to his destruction, and that in such a case his only safety lies in a timely flight.

But it is more difficult to conceive what influence this faculty can have in some of the other arts. Granting that in acting, a power which gives a command over the requisite feelings and sentiments, enables the actor to throw expression into his performance, seeing that in this case the feelings are directly expressed through the medium of his own bodily organs; how, it may be asked, is this done

in painting and sculpture, where the artist expresses nothing himself, but merely endeavours so to form a piece of inert matter without him, as to communicate, by means of it, the expression he desires. But we may perhaps come to understand this better, if we knew more of the manner in which artists proceed in forming their conceptions. I have heard it stated of a great living painter *, (and I have every reason to believe the statement to be authentic), that when he wishes to represent a particular character, or to communicate to a face any peculiar expression, he goes to a mirror, and having worked up his own mind to the kind and degree of excitement which he wishes to express, he watches the expression of his own features, as the feelings arise, and having once caught this expression, and fixed it in his mind's eye, he has no longer any difficulty in transferring it to convass.

But Secretiveness is not merely useful in the arts,—it is of essential service in the invention of plots, both in reality and in works of fiction. It seems indeed to contain within it the very germ and first principles of this kind of invention, as, although it does not form the combinations of itself, it sets those powers aworking whose business it is to form them; and it also enables the author to arrange his plot, and conduct it to a proper conclusion. After he has before him the whole series of events which he means to introduce, he is naturally led by Secretiveness to *mask* his battery, to *conceal* under some cover what he intends to relate, so as to prevent his reader from anticipating the catastrophe, until the point when it can be developed with the greatest effect. The reader is thus kept throughout the perusal, in that degree of suspence which is necessary to ex-

* Wilkie.

cite curiosity and interest: and hence it is, that *Secretiveness* is a necessary ingredient in a talent for fictitious narrative.

When Secretiveness is found in combination with Wit,—or that power which gives the perception and love of the ludicrous, it becomes what is called *humour*,—a quality which the metaphysicians have often endeavoured to explain without success. Humour is of various kinds, or at least the talent is exhibited in a variety of different ways; and in all of them it appears to me that Secretiveness is largely concerned. There is one kind of humour, which consists in the nice perception of what is ludicrous in character. Now, if to a tolerably endowment of the feelings of the ludicrous, there be added Secretiveness, which gives, as we have supposed, an instinctive tact of discerning character, and a power of penetrating through all the ordinary disguises which Secretiveness throws around the characters of others, we have at once all the materials necessary for this species of humour. Secretiveness enables us, by reading the natural language of Secretiveness in others, to see through these little concealments and contrivances, by which they attempt to impose upon the world, and almost upon themselves, and to pass for something else than they really are. The man of humour delights in detecting these little pieces of deception, and the *ludicrous* effect of this seems to arise from the incongruity which appears between the real and the assumed character, the contrast between what is intended to be apparent at the surface, and that which is seen to be at the bottom. Of all the sources of humour, there is none more fertile than the manifestations of self-esteem, and love of approbation, operating upon a mind in other respects weak. The assumed airs of consequence and dignity which these impart, appear most ludicrous when contrasted with the insignificance and folly which

are often seen to accompany them. The same is the case when any appearance of meanness, niggardliness or conceit peeps through the disguise of fair profession, which is outwardly thrown over them.

But humour is exercised not merely in perceiving and enjoying these traits of character, but in the power of exhibiting them to others, and of pointing out, for their amusement, that from which we have derived so much ourselves. This seems to depend as much upon Secretiveness as the other,—not only because, in order to exhibit the ludicrous traits to others, we must first perceive them, but because, in the very act of exhibition, we address ourselves to those very faculties in others, which enable us to perceive them. Hence the man of humour seldom or never makes a complete *exposée* of that to which he would attract our notice. There is no occasion for this; on the contrary, it would defeat his purpose. He contents himself with indicating merely what he would point out; and those who possess any degree of the power themselves immediately catch the idea he would convey, and penetrate to the very point to which he wishes to carry them. A humorous delineation of a character is, therefore, seldom a complete delineation, but consists generally of a few rapid traits or touches, from which all the rest is suggested to us by a kind of inference. These are mere outlines, which are left to be filled up by our own imaginations; and it is in this mental filling up, that half the pleasure attending them consists.

Thus, in the admirable delineation of *Falstaff*, when he says to *Doll Tearsheet*, who is sitting upon his knee, "I "am old,—I am old,"—we see that something is passing in his mind quite different from what he utters. We see at once that he does not wish to be believed, when complaining of the infirmities of age, but rather to draw from

her a contradiction that will be flattering to his vanity. When she replies, " I love thee better than e'er a scurvy young boy of them all," we see, also, that this is not her real sentiment; and the humour is heightened, when we contrast it with the very next sentence she utters, after the Prince and *Poins* make their appearance, " How, you fat " fool, I scorn you." When *Morton* of Millwood is reminded of the extravagantly generous promise into which he had been betrayed by his fears for his nephew's life, to pay twenty pounds for his liberation, there is exquisite humour in his reply, " Punds Scots,"—indicating exactly what is passing in his mind. The fit of momentary generosity had evaporated and disappeared with the fears that had first given rise to it; and his mind had returned to its original bent of sordid avarice, his ruling, if not his only permanent passion.

There is often great humour shewn in the delineation of a character, of which the original, were he actually alive and before us, would not be thought to possess any. ADDISON's humour is much talked of in his character of Sir *Roger de Coverley*, who certainly would not, in his own person, have been considered a man of humour. Sir *Roger's* character is, indeed, the reverse of concealment, as he gives utterance to many thoughts which other people keep to themselves. This is the very opposite of humour in itself, and is the same as what is called by the French *naiveté*. But still, in order to *represent* this naturally, there must be required that instinctive tact in discerning character which Secretiveness gives, and that quick sense of the ludicrous, which, when united together, form the talent of humour.

When this talent exists in perfection, it is accompanied by a *tact*, not only of perceiving the ridiculous in character, but in feeling what is the most effective way of com-

municating this to others. The secret often consists less in the matter that is to be told, than in the manner of telling it. The humorous man knows, or rather *feels* instinctively, the exact point where his delineations ought to stop, in order to produce the best effect upon his auditors and readers; how much he ought to show, and how much he ought to hide. In general, there should be shewn no more than is necessary to the understanding of the character; but how much should be shewn will depend upon the nature of the character to be exhibited, and the object in exhibiting it. Sometimes a single trait or two will be sufficient to let us into all that is required. In other cases, a much more detailed portrait is necessary; and there may be exquisite humour shewn in displaying a great deal. This is the case as well in the delineations which may be given of the characters of others, as in the displays which we may choose to make of our own.

In this last, humour may display itself in various ways; but in all of them, Secretiveness seems to have a share. It sometimes consists in suppressing feelings which we actually experience; and sometimes in assuming others which are not natural to us. There may be much secretiveness often even in an assumed *naiveté*, in speaking out openly those things which most people conceal, when this is done by design, where the individual has a sort of half knowledge that his intention is seen through, and when he half consents to make himself a butt. It adds greatly to the zest of this, when it is done with a perfectly grave countenance; and, indeed, this seems a necessary adjunct to all sorts of humour. In all this, it is proper to mention, that *it is not* meant to be said that *secretiveness* ever can be a substitute for *wit;* or that faculty which gives the feeling of the ludicrous. This is always understood as indispen-

sable; but what I mean to shew, is the manner in which Secretiveness assists that faculty in producing humour. The humorous man says and does the most ludicrous things, without seeming at all conscious of their ludicrous tendency; and while he excites his auditors to the most excessive mirth, maintains all the while himself the most imperturbable gravity. The command of countenance which this requires, can only be conferred by Secretiveness; and this is just one of the ways in which this faculty operates in producing humour.

There are other modes in which this quality is exhibited, among which may be mentioned, that species of writing which is called Irony, where one thing is said, and another obviously intended. This is a style which it is very difficult to manage; and we have hardly any master in it except SWIFT, who, in this particular, stands altogether unrivalled. The difficulty lies in making the ulterior meaning not too obvious; in which case the coarseness of the contrivance, and clumsiness of the execution, take away all the pleasure we might derive from it; and, on the other hand, avoiding the other extreme of hiding it too much, by which means the true intention of the writer is not perceived, and what he intends to say in jest is taken in good earnest. Secretiveness is, undoubtedly, the power which enables us either to use, or to perceive and enjoy the use of irony; and it is probable that this power was large in SWIFT and in other writers, who have excelled in the use of this weapon.

If the above account of humour be just, it may perhaps enable us to explain more satisfactorily than has been hitherto done, the difference between wit and humour. Wit always consists in some unexpected combination; but then this combination is placed before us openly and without

disguise; and hence we are never at a loss to point out exactly where the wit lies. But humour consists, in a great degree, in an intuitive tact; and as it addresses itself to the same *tact* in others, its manifestation, however palpable to the feeling, can hardly be made obvious to the understanding. Wit invariably makes the incongruous combinations which it shews us, and brings these openly on the stage before us. Humour only draws aside the curtain, and indulges us with a peep of what is going on behind it; and it seldom draws it entirely open, but, while it shews us a part, leaves a part to be guessed at and understood. Hence it is the property of humour that we can hardly tell what it is, or wherein it consists; and, in fact, it consists in nothing tangible. We do not laugh at that which is actually said or done, but at something beyond which this suggests to us. Hence it comes that wit is of a more portable quality than humour: a witty sally or bon-mot admits of being repeated, and is hardly the worse of being conveyed from one to another, till it is communicated to thousands. But humour is entirely personal to its possessor, and utterly incommunicable; so that the same words uttered, or things done, by a different person, and without the requisite accompaniments of tone, look, and gesture, which are peculiar to him, or which he knows how to assume, will, instead of exciting the most intense feeling of mirth, most probably appear perfectly inane and stupid.

Secretiveness being, then, necessary to humour, it will thus appear that the Comic Muse is no less indebted to this faculty than the Tragic, and that its use may be exemplified in scenes of the broadest farce, no less than in those of the deepest pathos. It is also indispensable to the art of story-telling, and this in various ways; first, as it gives the necessary tact in the discernment of character,

particularly in the development of those lower and meaner qualities, which are generally allied to the ludicrous; next, as it enables the narrator to bring out his matter in the order best calculated to interest his auditors, and so to mask his story as to surprise them with a sudden turn for which they are not prepared; and, lastly, it is of use in giving him the necessary command of countenance, so as not to betray the jest beforehand, until it can be brought out with the greatest effect.

But all that has been said of the uses of this faculty, is nothing in comparison with its eminent use in real life. There is no business which we can be called upon to transact, and hardly any situation of more or less difficulty in which we can be placed, in which some degree of this power is not only useful, but absolutely necessary, for enabling us to obtain success in our objects and measures. I do not here allude to any species of chicanery and cunning, which proceed from a too great endowment of this power, unregulated by higher principles; I refer merely to that proper, dignified reserve, which is necessary for enabling us to command respect,—to keep at a distance the busy, the idle, the impertinent, and the selfish,—that we may not, in short, "wear our hearts upon our sleeves for daws to peck at." This degree of reserve, which is perfectly consistent with all that is good and honourable, proceed from a proper endowment of secretiveness, duly regulated by the moral and intellectual powers. It may be said, that if all mankind were guided in their conduct by motives of uprightness and benevolence, there would be no occasion for the exercise of such a power as this, nor for any concealment either in our thoughts or our designs. A world so constituted might, no doubt, be extremely agreeable; but it would be a very different world from that in

which we are destined for the present to reside; and as the world is now constituted, there is not a power or a faculty of mind, which we possess of more eminent and signal utility than this of Secretiveness. Without it, where would be the confidence of friendship, the proprieties of social life, the delicacy so proper in the intercourse between the sexes, and the comforts of domestic privacy? It is this, when duly regulated by the higher sentiments, which gives to each individual his separate title to consideration and respect, and which enables him to act his part, and to fill his peculiar niche in society. A man altogether without Secretiveness, who gave utterance to every thought and to every feeling as it arose in his mind, though possessed in other respects of every other quality of mind in a state of absolute perfection, would appear to us in the light of a fool, and a nuisance. Were it not for this power, there would be no merit in honesty and sincerity, nor any thing like what we now understand by dignity of mind, or propriety of conduct. Society would, without it, lose most of what now constitutes its chief interest, and would be like a game where all the cards were spread open upon the table. In short, to state all the uses of this power, would require a volume; and many volumes might be written without explaining them fully. Enough has been said to shew that it is a power of the very first importance.

I cannot conclude, without noticing what has often been remarked with regard to the other special faculties, that no metaphysician has ever imagined the existence of such a power as this. Its functions seem, at first sight, to be so various, that it might be thought impossible they could be comprehended within the limits of a single faculty; yet, on more attentive consideration, these seem all to depend upon a few very simple principles, and to admit of being ana-

lysed and resolved into the same original element. No one could, beforehand, have predicated the existence of such a faculty, just as no one could, antecedent to experience, predicate the existence of a rose or a tulip; but, when it is shewn to us, and the relation of its different parts explained, it is acknowledged at once as the evident production of Divine contrivance.

III.—*On the Effects of Injuries of the Brain upon the Manifestations of the Mind.*

By Mr Andrew Combe.

(*Read 9th January* 1823.)

It is unnecessary for me to state what is already well known to the members of this Society, that the application to Nature of the mode of investigation discovered by Dr Gall, has, by revealing to us the functions of the individual portions of the human brain, proved eminently successful in dissipating much of that obscurity which so long enveloped the philosophy of the human mind, and in supplying what was for many ages one of the most important but hopeless desiderata of medical and physiological science.

The system of Phrenology is the immediate result of observations conducted in this way; but it has often been urged by the opponents, and those unacquainted with its doctrines, that "the system of Gall and Spurzheim, however ingenious or amusing in theory it may be, is annihilated by the commonest references to fact. Experience "has shewn us, that a man may live in the *full enjoyment* "*of his intellectual faculties*, although a part of his brain

" is destroyed by disease. Portions of the brain, various " in situation and size, have been found to have been en- " tirely disorganized, yet no single power of the mind was " *impaired*, even to the very day of the patient's death. " It would be difficult to find any one portion of the brain, " that has not, in some case or another, been deranged in " its structure, without any injury to the mind. Certainly, " it is said, of the parts specified by GALL and SPURZHEIM, " every one has, in its turn, been found wanting, without " any deficiency in that *intellectual* faculty which they " would represent it either to produce or sustain*;"—whereas, if Phrenology had its foundation in Nature, injury done to any particular part ought invariably to be followed by disorder of that particular mental faculty, with which it is more immediately connected, or of which it is the organ.

This objection, if correct, would no doubt go far to overturn the whole doctrines of Phrenology; and, coming as it generally does, directly or indirectly, from the medical profession, it is received by many with implicit confidence, and thus operates upon them with all the force of truth. In fact, to those who are alike ignorant of anatomy, of surgery, and of phrenology, and who are therefore incapable of forming an opinion of their own of its justness, it presents a very formidable aspect. I propose, therefore, in the following pages, to examine the evidence, upon the faith of which these assertions are so confidently made, and so confidently repeated; and I hope to be able to shew, that, so far from invalidating the fundamental principles of Phrenology, it, of itself, goes far to establish their truth. With this view, I shall first make some observations on the evidence afforded us of the state of the faculties, and then shall examine anatomically what inferences may justly be drawn from the extent, situation

* RENNEL on Scepticism, p. 100.

and nature of the injuries of the brain in the cases alluded to; and, lastly, I shall offer a few observations on the possibility of discovering the functions of the brain, from noticing the effects of its injuries,—a mode of proceeding lately recommended from high authority.

In proceeding to this inquiry, it must first be observed, that, without a single exception, all the cases alluded to are related by surgical authors, for surgical purposes, without the remotest idea of their being afterwards founded on to prove that entire preservation of the mental faculties may coexist with extensive disorganization of the organ of mind; consequently, in all of them, the state of the mind is merely mentioned incidently, and in very general and vague terms, as it was, in reality, scarcely attended to. Before placing reliance on evidence of this kind, therefore, it is natural, that, like the Reviewer *, we should "wish to see cases more minute in all their details, and observed with a view *specially to this physiological inquiry*, substituted for those "we at present possess." Under these conditions they become valuable, without them they are of no weight.

In almost every instance, as will be seen by a reference to Dr Ferriar's paper, in the 4th volume of the Manchester Memoirs, and to the 48th Number of the Edinburgh Review, the evidence of the integrity of the manifestations of the mental powers, after injuries of the brain, is given in such words as the following: "The senses were retained to "the last:"—All the faculties remained entire:"—"There "was no deficiency in any intellectual faculty:"—"No "single power of the mind was impaired."

This testimony, to be of the smallest value in establishing the point in dispute, necessarily supposes a perfect knowledge of the number and nature of the primitive fa-

* Edinburgh Review, No. xlviii. p. 448.

culties of the human mind; and also a previous knowledge of the healthy power of each, in the particular case under consideration.

Now, as to the first of these, it is very well known, that scarcely any two metaphysicians who make the philosophy of mind their particular study, are agreed either upon the number or nature of the primitive mental powers. Much less, then, can we expect the surgeon, engaged in the hurry of general practice, to be better informed. "Certain crude "ideas," says the Edinburgh Review of Sir E. Home's paper on the Functions of the Brain, "are attached to the "words Intellectual Faculties, *a vague conjecture arises as* "*to the seat and nature of these faculties* *." How, then, I would ask, can any one certify, even after the most scrupulous attention, that *all* the powers of the mind are retained, when he is ignorant what these powers are? When he is *ignorant*, for instance, whether the propensities of Destructiveness, Acquisitiveness or Secretiveness exist, and whether the sentiments of Veneration, Hope or Conscientiousness, are primitive emotions. The state of these, and other feelings and propensities, proved by Phrenology to be primitive, is never once alluded to in the history of injuries of the brain; and, consequently, for any thing we are told to the contrary, they, along with their respective organs, might have been entirely wanting, in every one of the cases which are advanced as instances of entire possession of the faculties. The opponents never speak of any except *intellectual* faculties; and in expecting lesion of these powers, when, for instance, it is the cerebellum, or posterior lobes of the brain alone, which are diseased, they at once display their own ignorance of the nature and number of the primitive faculties, and their most profound ignorance

* Edinburgh Review, No. xlviii. p. 439.

of the doctrines which they impugn. If an injury occurs of that portion of the brain lying under the most prominent part of the parietal bone, which the phrenologist states to be the organ of Cautiousness, and if we are in doubt as to the accuracy of the function assigned to it, and wish to have our observations confirmed or refuted by the phenomena attending such a case, one would naturally suppose that, as the organs are all double, we would begin by observing, whether the corresponding portion of brain of the opposite side partook in the disorganisation or not; and that we would then proceed to investigate the state of that particular faculty, of which these parts constitute the organs, and thus ascertain whether the feeling of Cautiousness ever remained undiminished, where, from the extent of the disease, it ought, according to the ordinary laws of the animal economy, to have been either impaired, or entirely awanting.

This mode of proceeding, plain and simple as it appears, is not fitted for the opponents of Phrenology. The opponent does not care, and does not inquire, whether it is one side only, or both sides, which are diseased: he makes no inquiry about the sentiment of Cautiousness: he proceeds at once to the state of the intellectual powers, with which Phrenology most distinctly teaches that that part of the brain has no direct connection; and finding none of the faculties which he calls Attention, Perception, Memory or Imagination at all impaired, he, with great confidence, concludes, that the part in question *cannot be* the organ of Cautiousness; and so satisfied is he with his own reasoning, that he laughs at those who do not see its cogency as clearly as he does himself. On any other subject, this mode of reasoning would be looked upon as proceeding from a very blameable and lamentable degree of ignorance, especially on the part of any one who comes forward un-

called for to the attack; but, as directed against Phrenology, it is looked upon by many as satisfactory and philosophical in a high degree. Such is the kind of testimony supported by which, the opponents are pleased to affirm that in many cases of wounded brain, no diminution, much less loss, of any faculty, takes place. We shall see afterwards how these cases tally with their own creeds.

But, even supposing that the number of primitive faculties was known, it is clear that no dependence can be placed upon cases not observed, with a view "specially to "this physiological inquiry;" for daily experience proves, that whenever a patient is able to return a rational answer to any simple question about his health, the surgeon and attendants, whose attention is not directed to the point, invariably speak of him as in full possession of all his faculties, although he is as unable to think or reason on any serious subject, with his accustomed energy and facility, as a gouty or rheumatic patient is unable to walk with his accustomed vigour. The former has, no doubt, *as many* faculties as before, just as the latter still has the power of muscular motion; but the power of exercising them is as much diminished in the one case, as that of using the muscles is in the other. Even take a convalescent from an acute disease, and introduce any subject which requires a train of thinking, and concentration of mind, to which, in health, he is fully equal, so far from retaining his powers undiminished, he will soon be reminded of his enfeebled state, by painful confusion in the head, and other disagreeable symptoms. But, confine his attention to any thing, which requires no effort on his part, and you benefit, rather than harm him by such exercise, for it is then suited to the diminished vigour of his mind. Now, this is precisely the kind of discourse which the judicious surgeon permits to his patient, and from it alone he forms his own opinion of

the state of the mind; and, therefore, a person in such state is uniformly said "to retain his faculties," &c. In like manner, the convalescent gouty or rheumatic patient, if gently exercised by strolling about his room, reaps benefit and strength; but suppose you force him to an effort beyond what his muscular energy is calculated to support, the same bad effect is produced as in the case of the mind. As well might this person be said to retain his power of voluntary motion undiminished, as the other all his force of intellect unimpaired.

That the evidence as to the state of the mind, after wounds or alteration of the cerebral mass, is really so vague and unsatisfactory, may easily be shewn from Dr FERRIAR's paper, and from the Edinburgh Review, the text-books of the opponents. Besides the objection of extreme latitude in such expressions, as "no loss of sensibility," no loss of voluntary motion, &c. &c., when used to indicate the condition of all the mental faculties, it may be remarked, that Dr FERRIAR speaks of one man as retaining all his faculties entire, who, it appears, had laboured under hypochondriasis for ten years; a disease which so nearly affects the mind, as to have been sometimes classed in the list of insanities: and of a girl who, with evident symptoms of oppressed brain, is also said to have retained her faculties; and that the reviewer speaks of a lady, who, "the "day before her death, was capable *of being roused from* "*her stupor*, and was then in possession of all her senses." But the idiot from birth, when roused from his natural stupor by the exaltation of a fever, appears sometimes to gain a considerable share of intellectual power, only to be lost upon recovery. Will he too, then, in his state of stupor, be said to be in full possession of every faculty, because thus shewn to be susceptible of excitation from stimuli? The one inference appears as logical as the other.

As soon as the number of the primitive faculties, and the situations of their respective cerebral organs are discovered, then, but then only, we shall be able to judge fairly of the consistency of the phenomena with the functions assigned to the injured part. If the true function is discovered, it will derive additional confirmation from the observation of these cases, and *vice versa*.

2dly, It appears to be a self-evident proposition, that before we can affirm that a man possesses all his mental faculties unimpaired under disease, we must have had some previous knowledge of their natural energy in the state of health. The difference of intellectual vigour between man and man is exceedingly great. The scale extends from the lowest pitch of idiocy, up to the highest endowment of genius; and the history of diseases informs us, that a man, whose faculties have suffered a great diminution of energy, is still able to return a rational answer to a question, although his mind is unable to fathom the depths it penetrated before; and, when we consider that injuries of the head are by far more frequent in hospital than in private practice; and that, in the former, the surgeon has seldom seen the patient before, it will be obvious, that even supposing the testimony as to the state of the faculties to be as specific and precise as it is general and vague, still, in a great majority of instances, the surgeon is unfavourably situated for speaking of the comparative force of any of the faculties, because they do not form the object of his inquiries, and although they did, he is in utter ignorance of their state before the injury was sustained.

Having now shewn that the observers quoted by the opponents were evidently deficient in the two qualifications which are necessary to enable us to judge of the possession or diminution of any individual faculty, in cases of disease or wounds of the cerebral mass; I proceed to point out an

anatomical requisite, which, although as essential as the other two, could not have been possessed in any perceptible degree, by one out of ten of those to whom the cases occurred, or by whom they are quoted. I allude to a knowledge of the *situation*, *form*, and *direction* of fibre of the several organs, of which the brain is a congeries. Without this knowledge, any observations are manifestly imperfect:—nine-tenths of the cases occurred long before the organs were discovered, and the remaining tenth, I believe, were observed in ignorance of the discovery, so that all come under one class. Whenever any one can prove that he has found both the organs of Conscientiousness, for instance, destroyed, while that feeling was manifested as powerfully as before, then he proves that function to be erroneously ascribed to that organ. But unless he knows accurately the situation of that organ towards the surface, and the direction of its fibres towards the interior, whether they are horizontal, vertical, or oblique, and unless he ascertains the condition of the organs of both sides, How can he venture to affirm that they were destroyed either in whole or in part? We are told, indeed, by Mr Rennel, and other opponents, that every individual part specified by Gall and Spurzheim has in its turn been destroyed, without injury to the faculty of which they call it the organ. But if we examine the foundations upon which such assertions rest, the same want of precision, the same inconclusive vagueness, will be found to prevail, as in the evidence of the state of the mind. Not a single case in point can be produced; and it is evident that Mr Rennel, as well as the other opponents, supposes the organs to be confined to the surface of the brain, instead of extending to its very base, to the medulla oblongata. They also, by what rules of logic I know not, appear to think injury of one organ

sufficient to destroy the function of both, although they may daily see the reverse exemplified in the case of the external senses at least.

It is unnecessary for me to remind you, that the brain is composed of two similar halves or hemispheres, and that, consequently, the organs of all the faculties are double. That one eye, one ear, or one nostril may perform its function, and the person see, hear, or smell, although the eye, ear and nostril of the opposite side is diseased or injured, is a fact of which all are aware. Now, as the organs of the mental faculties are double, analogy would lead us to conclude, that such will also be the case with them; and that before we can expect complete loss of any one faculty, the entire organ of each side must be destroyed, just as both eyes or both ears must be diseased, before complete loss of sight or of hearing occurs. *It will be seen, however, from an attentive perusal of the cases quoted, that not a single instance is to be found, in which this destruction of both organs has occurred, while the alleged manifestations existed.* In almost all the cases, the injury or disease is expressly said to be on one side only; and where it is on both, the parts affected are different. But this will be better understood by a statement of the cases themselves, as they are recorded in the Manchester Memoirs, and in the Edinburgh Review.

Mr Earle relates the case of a man *whose sensibility* remained unaffected till within a few hours of his death, although an abscess occupied nearly one-third of the right hemisphere. Mr Abernethy saw a gentleman who lived for two years in the full possession of every faculty, notwithstanding a cavity two inches broad by one long in the right hemisphere. Another was perfectly sensible with an abscess in the left hemisphere. Sir John

Pringle (Diseases of the Army, p. 259.) found an abscess in the right hemisphere, as large as an egg, in a patient, "*who had never been delirious, nor altogether insensible;*" and in another, "*who had never been so insensible as not to answer reasonably when spoken to,*" he found an abscess in the cerebellum as large as a pigeon's egg. Dr Ferriar says that Dr Hunter found the whole of the right hemisphere destroyed by suppuration, in a man who retained his faculties to the last. One of Wepfer's patients manifested no *loss of sensibility*, although a cyst was found in the right hemisphere of the brain as large as a hen's egg. Diemerbroek saw a young man who received a thrust from a sword, which entered at the eye, and passed upwards through the right ventricle, as far as the sagittal suture. During ten days, he "*remained quite well,*" with no loss of sensibility, of voluntary motion, or of judgment, "cum sociis convenienter, et bono cum judicio, quacunque de re disserens;" after which he was cut off by a fever. Petit (Mémoires de l'Acad. 1748) saw a soldier, shot through the left lobe of the cerebellum and left posterior lobe of the brain, live forty-three hours, whose faculties were perfect to the last. Another man, mentioned by Quesnai as seen by Bagieu, received a musket-shot from below upwards through the right anterior lobe, who had *no bad symptom* till the twelfth day, and ultimately recovered. Next are mentioned three cases; in the first of which a ball, in the second the end of a stiletto, in the third a part of a knife, remained in the brain *without inconvenience* for some years. Genga tells us of a man who, from a blow on the left parietal and occipital bones, lost a portion of brain as large as a pigeon's egg, and *yet recovered.* Petit saw a man with a corpus striatum converted into a matter like dregs of wine, with no *loss of sensibility*, although one side was paralysed. Valsalva saw an old man who was *not insen-*

sible; with an abscess of the right thalamus opticus extending to the surface of the brain.—Then come some cases of diseased pineal gland and cerebellum, without loss of sensibility. The Reviewer then speaks of a lady who complained for a fortnight of an affection of the head, became comatose, and died. "The day before her death she was capable of being roused from her stupor, *and was then in full possession of all her senses.*" The left hemisphere of the cerebellum was converted into pus. Then follows a case from LA PEYRONIE, nearly similar, without *loss of sensibility.* DRELINCURTIUS (Addend. ad WEPFER, Hist. Apop. Obs. 83.) saw a steatomatous tumour as large as the fist between the cerebrum and cerebellum, produce first blindness, then deafness, and at last the abolition "omnium sensuum et functionum animalium, et necem ipsam." Dr TYSON (Phil. Trans. No. 228.) mentions a case where the left hemisphere of the cerebellum was found sphacelated, and the testis of that side enlarged and stony. The patient had been ill two months, and for the most part rational. In the Mémoires de l'Acad. Royale, 1703, DUVERNEY relates a case of extensive injury, *without loss of sensibility.* The Chevalier COLBERT received a blow from a stone upon the temple, which drove in the bones forming the back part of the orbit, as well as the sella turcica. The inferior portion of the middle lobe of the brain, as far as the cerebellum, was found broken down, and partly in a suppurating state. He lived seven days, "retained his judgment "perfectly, continued to perform all his functions, and ex- "hibited a surprising tranquillity of mind till his death." FERRIAR attaches little importance to this case, as confused. One of the most remarkable cases is that quoted by the Reviewer from PLANQUE, and by Dr FERRIAR from LA PEYRONIE, as having occurred to BILLOT, (Mém. de l'Acad. 1741.) A boy of six years received a pistol-shot

in the middle of the brow, which passed through to the occiput. He survived eighteen days, and lost a portion of brain as large as a nutmeg daily, and yet *remained quite well* until within a few hours of his death. The portion of brain found remaining in the skull did not exceed the size of a small egg.

The Reviewer then quotes three cases of hydrocephalus internus, or water in the head, which convince him that sensibility may remain after the whole brain has been destroyed.

Many of the Reviewer's cases are taken from Dr Ferriar's paper in the Manchester Memoirs. I shall, therefore, select the most interesting of those which remain. Diemerbroek, Anat. lib. 3. p. 637, quotes a case from Lindanus, of a patient receiving a wound in one of the lateral ventricles, who went about as usual for fourteen days, and then died. His surgeon thrust a probe into the ventricle every day without exciting any sensation. He says, p. 580,-1., he saw a woman who lost a portion of brain as large as the fist, from a fracture of the *right* side. She lived thirty-six days without alienation of the mind, although paralytic on the opposite side. In the appendix to Wepfer's Hist. Apoplect., Dr Brunner mentions a case of a drunken blacksmith, aged sixty-four, who died of apoplexy, whose faculties were rather excited than impaired, although he observed after death "piam matrem aqua turgidissimam.—"Ablata dura matre serum perpetim exsudavit et effluxit "limpidum. Uterque ventriculus aqua scatebat turbida, "quin omnes recessus et cerebri cavitates hac inundatæ et "repletæ fuerunt. Cerebellum minime flaccidum, sed sicut "reliquæ cerebri partes firmum apparuit," &c. He was rather acute in his intellect towards the end. La Peyronie mentions a case of a man who had been troubled with hypochondriacal symptoms for ten years, whose faculties were

never affected, although the fourth ventricle and cerebellum were found diseased. A girl died in the fourth month of an arthritic complaint, with *evident symptoms of oppressed brain*, but in perfect possession of her intellectual powers, although the brain was soft, and water effused. BONNET saw a case, where, after eleven days illness, and only towards the end, occasional alienation of mind, "tota "fere basis cerebri, imprimis cerebellum, et ea pars me- "dullæ spinalis qui primis vertebris excipitur, sphacelo "inventæ sunt correptæ."

The Doctor concludes by quoting from AMBROSE PARE', what he considers a most extraordinary case; but PARE'S authority being very great, he thinks it merits confidence. It is that of the DUC DE GUISE, "who was wounded in the "head by the thrust of a lance, which entered *under* the "right eye, near the nose, and came out at the neck, between "the ear and the vertebræ. The steel remained *in the brain*, "was extracted with great difficulty, and the patient re- "covered." Such are the principal cases.

The farther removed an account is from what we are accustomed to observe in ordinary circumstances, the stronger is the evidence required, before we can believe it, and inversely. So, in the present instance, when we find almost all the cases mentioned, consisting of very partial injury of one side only of the brain, with no striking disturbance of intellect, we are not disposed to be scrupulous in admitting them to be true. We see such things occur in our own day, and they are in themselves sufficiently probable; seeing that the organs are double, and that one may be affected without the other participating in the injury; and that the organs of the intellectual faculties constitute so small a portion of the brain, as to leave nearly two-thirds of the whole mass to be destroyed on *both* sides, without necessarily interfering with the intellect. But when we come to such cases as that of the boy, who lost all his brain except-

ing "*about the bulk of an egg*, and yet remained *quite well*" till within a few hours of his death, we are compelled to pause, and ask for stronger evidence than that afforded by a quotation at third hand of a single case. Neither the Reviewer nor Dr Ferriar appear to have seen Billot's own account of it, since each has quoted from a different source; and not having been able to procure the original work, I know not whether it is correctly quoted by either. No such case, we may rest assured, has occurred in our own day, otherwise we should have heard of it. In like manner, when we are told, as in the three cases alluded to by the Reviewer, of the faculties remaining entire after the complete destruction of the brain by water, we require evidence of no ordinary force before giving credit to their truth, in the face of so many facts of an opposite nature. More especially so, since the late discoveries by Gall and Spurzheim of the structure of the brain, shew the fallacy of the appearances commented upon as indicating its absence.

Out of the twenty-nine cases here quoted from different authors, *eighteen* expressly refer to injury of *one side only*. These require no remarks; for, granting that none of the faculties were lost, there still remained the sound organs of the opposite side to execute the functions. *Five* more expressly refer to injury or disease of the *cerebellum* and *fourth ventricle*, parts which have no immediate connection with the exercise of the intellectual faculties. In two, the side is not mentioned, and another is Billot's case. In three more, the whole brain was extant, but altered in appearance. Some of these demand a few observations.

In Dr Brunner's case of the drunken blacksmith, who died apoplectic, the whole of the brain was still extant at his death; but a quantity of water was found effused upon it; notwithstanding which, he not only retained his fa-

culties, but was even more acute. "Cerebellum minime "flaccidum, sed sicut reliquæ cerebri partes firmum ap-"paruit." This is the consequence of a certain degree of inflammation, which, in the case of the brain, as well as in that of other organs, often exalts instead of diminishing the function. The effusion appears to have been the cause of the apoplexy and of death.

In the hypochondriacal patient, even supposing all the faculties to have been unimpaired, the visible seat of the disease was confined to the cerebellum and fourth ventricle, and did not extend to the organs of the intellectual powers. In Bonnet's case of eleven days' illness, with occasional alienation towards the end, where the cerebellum, part of the base of the brain, and a portion of the medulla spinalis, were mortified, "sphacelo inventæ sunt correptæ," the part of the base of the brain is not mentioned; and, therefore, no conclusion can be drawn in favour of the organs of the intellectual faculties having been even partially destroyed; and, besides, there is every reason to believe the sphacelus to have been the immediate forerunner of death, and not to have existed for any length of time.

Lastly, Although what Ferriar calls the very extraordinary case of the Duc de Guise, be included in the eighteen cases of injury of one side only, it is deserving of particular attention. The lance entered *under* the right eye, near the nose, and came out at the neck between the ear and vertebræ. The steel, it is said, remained *in the brain*, was extracted with difficulty, and recovery followed. The state of the faculties is not even mentioned. In this case, he says, the base of the *brain* must have been extensively injured. I humbly apprehend, however, that the brain was not, and could not be touched. Let any one examine on the head of his neighbour, or on the skull, the direction of such a wound, and I think he will agree in this opi-

nion, and will then be at no loss to account for the difficulty of extracting the steel. Having seen it stated in BOYER's Chirurgie, that the spear entered *above* the eye, I procured the original work of AMBROSE PARE', and found that Dr FERRIAR was right in saying that it entered *under* the eye. But PARE' never once mentions either brain or faculty. He says, " The head of the lance stuck so fast as to re-" quire a pair of smith's pincers for its extraction. Al-" though the violence of the blow was so great, that it could " not be without *fracture of the bones, a tearing and break-*" *ing of the nerves, veins, and arteries, and other parts*, yet " the generous Prince, by the favour of GOD, recovered," p. 235, lib. x. Although the state of the faculties is not mentioned by Dr FERRIAR, I remember to have read in some French author, that the Duke bore the extraction with great fortitude, and retained his faculties apparently undiminished, and the above quotation accounts perfectly for the fact; for it shews that the brain was not in the least affected, the wound being altogether below it. In the case of the Chevalier COLBERT, also, Dr FERRIAR says, the eye was crushed to pieces, and the orbit knocked in; which misapprehension must have arisen from the confused account given by the original author DUVERNEY; for, in point of fact, the stone struck the *temple*, and not the front of the eye.

Little confidence can, at any time, be placed in the history of dissections, made only to discover the cause of death, when afterwards applied to physiological purposes. The surgeon, who has been in the habit of seeing numerous dissections, and particularly in hospital practice, made with this object alone in view, knows well how *very general* the examination of the diseased parts frequently is, even when seated in organs whose structure and functions are both known; and this observation naturally applies with double

force to parts so little known as those contained in the cavity of the cranium. The Edinburgh Reviewer himself, in speaking of some parts (such as the corpus callosum, fornix, &c.), which have *not been expressly mentioned* as destroyed, says, p. 446., "We believe, indeed, that several, if "not the whole of them, were actually destroyed in the "cases we have quoted; but that they were omitted in the "detail of the dissection, either from a fear of being te-"dious, or because the authors did not conceive *minuteness* "*of description to be an object either of practical or physi-*"*ological importance.* As it is, however, instances are still "wanting, in *which the parts we* have enumerated are *ex-*"*pressly stated to have been destroyed;* and we beg leave "to call the attention of the physiologists to this circum-"stance," &c. The phrenologists, in like manner, may truly say, that instances are still wanting, in which any one of their organs is expressly stated to have been destroyed, and the function remained.

To such an extent, indeed, have anatomical structure and minuteness of detail been neglected in the history of the diseases and injuries of the cerebrum and cerebellum, *in so far as they are connected with the mind*, that in almost every instance, the palpable fact of the organs being double has been overlooked; and not only has no attention been paid to the situation of the individual organs, in examining the effects of their injuries in relation to Phrenology, but it never has once been taken notice of by the opponents, that, while they confine their attention to the state of the *intellectual faculties alone* in all cases of wounded brain, the organs of these faculties, in the new system, constitute not more than one-third of the whole cerebral mass. The other two-thirds constitute the organs of the sentiments and propensities, which are never inquired into, as not being conceived to have any thing to do with the brain.

As it appears, then, notwithstanding the affirmations of the opponents to be quite consistent with the principles of Phrenology, that injuries of the brain may occur, without necessarily affecting the *intellectual* faculties, I might, perhaps, here safely drop the subject. Before quitting it, however, we may shortly inquire how far the cases referred to coincide, or are compatible with the doctrines which the opponents themselves profess. They tell us, for example, that the whole brain is the organ of mind, and that every part of it is engaged in every act of thought. Now, it seems to me, that their own cases are fatal to any such theory; for were any part of that general organ injured, the function, even according to their own account, ought always to be impaired in proportion as the brain is subject to all the ordinary laws of animal organisation. Instead of which, it would appear that the function does not suffer with *almost total* destruction of the brain! How can they reconcile this remarkable fact with their leading principle of unity of organ? No part of the human body is known to retain its functions unimpaired, amidst total or partial change, or destruction of its structure. Had they not been blinded, therefore, they must have perceived that this very circumstance was sufficient to prove that every part of the brain was *not* necessary to every individual act of mind, and that the brain was not the single organ they believed it to be. Phrenology, or the doctrine of a plurality of organs and faculties, alone satisfactorily explains the apparent contradiction, by showing, that the state of one organ, or part of the brain, does not necessarily affect the state of all the others.

Those philosophers who believe in the brain, *as a whole*, being the organ of mind, and yet believe it proved, that a brain reduced to the size of an egg is sufficient for the mental manifestations, believe absolute contradiction. If such

cases really occur, the only legitimate conclusion we can deduce from them is, that the brain is not the organ of mind, —a conclusion which would require no small body of evidence for its support, before we could receive it as correct, considering the innumerable host of facts, not of old date, but of every day's occurrence, which irresistibly lead to a contrary result. Is it not a little strange, then, to see Dr FERRIAR, in the paper already quoted, in one page gravely doubting whether the brain has not been altogether destroyed, without loss of mental faculties; and in another declaring, that he "considers these medical facts as almost "demonstrating that the brain is the *instrument*,—not the "cause of the reasoning powers?" We, too, consider the brain as the instrument of the mental faculties; but we are not so inconsistent as to suppose, with the metaphysicians, that it is a matter of indifference to these faculties whether that instrument be a whole or a broken one, or have even altogether ceased to exist. Phrenology, then, so far from having any thing to fear from these "medical facts," derives additional confirmation from them, since it is upon phrenological principles alone that they are either explicable or consistent with any of the known laws of nature. And it is in such circumstances that the new science rises so far superior to any theory of the mind hitherto invented; and it can only be from its being founded on the solid basis of truth, that it is ever so beautifully and simply consistent with the observed phenomena of mind, alike in a state of health and of disease.

I proceed now, as mentioned in the beginning of this paper, to make a few observations on a mode of investigating the functions of the individual parts of the brain, proposed by that excellent surgeon Sir E. HOME, in a paper in the Philosophical Transactions for 1814, and differing widely from that in use among the Phreno-

logists. "The various attempts," says he, at page 469., "which have been made to procure accurate information "respecting the functions that belong to individual portions "of the human brain, having been attended with very lit- "tle success, it has occurred to me, that were anatomical "surgeons to collect, in one view, all the appearances they "had met with, in cases of injury of that organ, and of the "effects that such injuries produced upon its functions, a "body of evidence might be formed, that would materially "advance this highly important investigation."

As this mode of inquiry is still looked upon by many as the most promising and philosophical that has yet been tried, and as such is recommended by the Edinburgh Review, it may be worth while to see what it is really able to effect. To me it appears to be totally inadequate for the purposes of original discovery, although it may be usefully employed to procure additional information, after the functions of the different parts of the brain have been investigated phrenologically.

It is inadequate, 1*st*, because, from the mere aspect of the wound, we are never certain of the precise extent of the injury done to the brain, and consequently can never positively refer the phenomena to an affection of any particular part, and of it alone. One injury, for instance, apparently of the very slightest nature, often produces the most serious constitutional symptoms, and disturbance of the whole mind; while another, to appearance much more severe, is productive of little inconvenience. In the former, the effects of the violence seem to extend either immediately or from sympathy over the whole brain, or at least, much farther than the mere point of contact, the visible seat of the mischief; while in the latter, the affection is more of a local nature; so that the results obtained in one case appear to be negatived by those obtained from another. 2*dly*,

Because the complicated structure of the brain (about which, besides, so little is known), makes it exceedingly difficult, if not impossible, to injure or destroy one part without the neighbouring parts participating in a greater or less degree, so that their function is also deranged. Professor Rolando of Turin, who has devoted much of his time to the study of the anatomy and functions of this organ, in speaking of mutilations, performed upon the lower animals, says, "I have made innumerable experiments to dis- "cover the results of injuries done to the bigeminal tu- "bercles, and the parts in the neighbourhood of the "optic thalami, but I have rarely obtained consistent re- "sults; which is not surprising, if we consider the pecu- "liar interlacing of the numerous medullary fibres which "meet in these parts; for as it is extremely difficult to "know what bundles of fibres have been affected in these "operations, we cannot draw clear and precise conclu- "sions, where there is a difference in the result." If this holds true with regard to mutilations performed with every precaution to avoid wounding other parts, and under every advantage which an acquaintance with the anatomy can afford, it certainly applies with tenfold force to injuries, the results of accidental and unguided violence.

Now, it will be seen by a reference to Sir E. Home's paper, that although his cases must have been observed with a view to this inquiry, the same want of specification as to the precise limits and situation of the injury, shews itself in almost all of them. So that, taking the divisions as marked out by the Phrenologist, it would be impossible to tell, from his description, what particular organ or organs were the seat of the mischief; much less to say, whether any one organ was destroyed in its whole course from the base to the circumference. He does not even allude to the

organs being double, much less does he ascertain, how much of the function is performed by the one side or by the other, when either is diseased alone, as is the general case.

Sir EVERARD confines himself to the consideration of those cases which have come under his own observation, and divides them into ten different classes. 1*st*, Effects produced by an undue pressure of water upon the brain: 2*d*, Effects produced by concussion of the brain: 3*d*, Effects produced by preternaturally dilated or diseased bloodvessels of the brain: 4*th*, Effects produced by extravasated blood: 5*th*, By the formation of pus: 6*th*, By depression or thickening of parts of the skull: 7*th*, Pressure from tumours: 8*th*, Injury to the substance of the brain: 9*th*, Alteration of structure: 10*th*, Injury of medulla spinalis. It will occur to the mind of every one, on considering the nature of the diseases included under these different heads, that in all of them, except the last, the totality of the brain is affected in a greater or less degree. As almost all, in one sense at least, resolve themselves into cases of general pressure, some attended with peculiarities from which others are free; consequently the effects produced are *general*, as delirium, convulsions, apoplexy, coma, sickness, watching, and the like, and not lesion of any particular faculty, such as could possibly indicate the function of a part. In one or two instances, the state of the memory and external senses is mentioned along with other generalities. So that, to use the words of the Reviewer, "The greater number "of cases serve only to confirm what had already per- "haps been sufficiently made out by the authors we have "named; to-wit, that there is no sort of uniformity either "in the kind or degree of the symptoms which accompany "diseases of the brain." No sound inference, therefore, can be deduced from them alone, as to the function of any particular part, in as far as the mind is concerned.

But supposing the functions and localities of the different parts of the brain to have been accurately ascertained by some other means, then the facility of making interesting physiological and pathological observations is so greatly increased, that much valuable information may be attained from attention to the effects of injuries and disease; especially in some individual cases, in the 8th and 9th sections of Sir E. Home, viz. partial injuries and partial alteration of structure. But so long as the anatomy of the brain is imperfect, and so long as the exact situations and precise functions of its component parts or organs are unknown, we cannot with certainty pronounce upon the nature of the lesion; we cannot say, whether it is confined to one organ or part of an organ, or whether it extends to several, whether it affects the same parts on both sides, or different parts, and consequently, amidst the complicated phenomena which present themselves before us, we are completely at a loss, when we attempt to refer each to its own cause.

If an injury of the cerebellum, or of part of the posterior lobes of the brain, occurs to a philosopher, who is firmly satisfied in his own mind "that the whole brain is engaged "in every act of thought," and that no part of it is in connection with any of the propensities or sentiments, what inference can he draw as to the function, upon finding no intellectual faculty with which he is acquainted, impaired or wanting? He cannot consistently investigate the state of the propensities, and refer any irregularities among them to the injury sustained, because these are not intellectual faculties, and, according to him, can have no connection with the brain. He remains of necessity as much in the dark as ever. But let such a case occur to the Phrenologist, or to him who has ascertained, by previous observation, the uses of the part, it is evident that, although he could not any more than the philosopher infer the

function from a consideration of the symptoms alone, yet having discovered it by other means, he comes to the inquiry fully competent to judge whether his former observations are confirmed or refuted by the phenomena now before him. It is only when in possession of this previous qualification that we can derive any advantage from such cases in increasing our knowledge of mind.

That the philosopher with such views could never have been led to the discovery of the connection between certain parts of the brain and the propensities and sentiments, by the mere observance of their injuries, is proved by wounds of these parts having been actually attended with symptoms corresponding to their phrenological functions, and neither he nor the anatomical surgeon having drawn any such inference. Wounds and diseases of the cerebellum, for instance, have forced themselves upon their notice, where the sexual prospensity was extinguished by loss of substance, or preternaturally excited by the subsequent inflammatory action; and yet no one drew the inference that the cerebellum was the organ of Amativeness *. The temper and moral sentiments have also been entirely changed, in consequence of certain injuries of the brain, while the intellect remained unimpaired; and no one drew the conclusion that the parts affected were the organs of these sentiments. Nor would they have been warranted in doing so, because instances of injury confined so entirely to one part, as to affect its function, without having any influence upon those of the neighbouring parts, are so few and so rare, in comparison to those of an opposite kind, that no just inferences can be

* Wepferus' Historiæ Apoplecticorum, edit. 1724, p. 487. Majendie's Journal de Physiologie for April and August 1822: also Medical Repository, vol. xviii, p. 268–358.—Larey's Memoires de Chirurgie Militaire et Campagnes, vol. ii. p. 150; vol. iii. p. 262.

drawn from them alone; although, combined with other evidence, they are highly important.

Time will not permit me to enter upon the consideration of mutilations performed upon the brains of the lower animals, with a view to discover the functions. They appear from other causes to be as inconclusive as the observation of the effects of injuries in man. At another time, I may perhaps lay before the Society some account of the experiments performed by Professor ROLANDO about sixteen years ago, and contained in his book, "Saggio sulla vera strut-" tura del Cervello del Uomo et degli Animali, e sopra le " funzioni del systema nervoso," Sassari, 1809. I have not yet been able to procure this work; but a very interesting analysis of it is to be found in the first volume of the Archives generales de Medecine.

These experiments, in themselves of very considerable interest, have now an additional claim upon our attention, in consequence of the publication of a report to the French Institute, by the celebrated CUVIER, upon the merits of a memoir laid before that body, by Mons. FLOURENS, in which an account is given of several experiments very similar to those performed by ROLANDO, and which afforded nearly the same results, although FLOURENS carried on his researches in ignorance of ROLANDO's labours.

IV.—*Cases of Deficiency in the Power of Perceiving Colours.*

I.—*Remarks on the Faculty of Perceiving Colours*

By Dr Butter, F. R. S. L. S. &c.

(*Read 28th November* 1822.)

Knowing how much you have directed your attention to the subject of optics, and that every variation connected with the ordinary phenomena of vision is interesting to you, I transmit, without farther apology, the particulars of the following case, which my friend, Dr Tucker of Ashburton, Devon, has lately made known to me in the instance of his own son. About two years ago, Mr Robert Tucker, who is now aged nineteen, and the eldest member of a family of four children, discovered that he was unable to distinguish several of the primitive colours from each other. He was employed in making an artificial fly for fishing, intending to have constructed the body of the fly with silk of an *orange* colour, whereas he used that of a *green*. When the error was pointed out to him by his younger brother, he could not believe it, until it was confirmed by other persons. Threads of orange and green silk were then twisted round his finger, and he could not perceive any difference in them, but thought them to be the same

coloured thread twisted several times. This circumstance led to a trial of his powers for distinguishing other colours; and the following are the results which have been ascertained, taken correctly by frequent repetition, and confirmed by the trials made in my presence. Many of the leading or primitive colours, he neither knows when they are shewn, nor remembers after they have been pointed out to him. Certain colours are confounded with each other. Orange he calls green, and green colours orange; red he considers as brown, and brown as red; blue silk looks to him like pink, and pink of a light blue colour; indigo is described as purple. The seven prismatic colours seen in the spectrum are described in the following manner:

Colours.		Colours.
1. Red, mistaken for	- -	Brown.
2. Orange, ...	- -	Green.
3. Yellow, generally known, but sometimes taken for	- - -	Orange.
4. Green, mistaken for	- -	Orange.
5. Blue, ...	- -	Pink.
6. Indigo, ...	- -	Purple.
7. Violet, ...	- -	Purple.

So that the *yellow* colour alone is known to a certainty. The colours were shewn to him on silk, on feathers, and in SYME's book of *colours*, with uniform result. Red and brown colours appear the same, as well as green and orange, blue and pink, and indigo and purple. With the exception of black or white objects, which he seldom mistakes, all colours are by him divided into three classes, viz.

1*st*, Includes red and brown.

2*d*, Includes blue, pink, indigo, violet and purple.

3*d*, Includes green and orange colours.

He can generally say with certainty, to which of these three

classes any colour belongs; but he mistakes one colour for another. A difference in the shades of green he can distinguish, though not the green colour itself from the orange. Soldiers' scarlet coats appear red. Grass looks green *. The colours of horses are quite unknown to him, except a white or black horse. A bay, a chesnut, and a brown horse, is described of the same colour. The colours of the rainbow, or of the moon, appear nearly the same, being two-fold; at least, two distinct colours only are seen, which he calls *yellow* and *blue*. A blue coat, however, he can distinguish from a black; but this circumstance may be owing to the metal buttons on the one coat, and not on the other; and a yellow vest is always known to him. By day, he called carmine red, lake red, and crimson red, *purple*, in WERNER's book of colours by SYME; but by candle light, this error was detected, and the colours were called *red* with a tinge of *blue*. Black, which is the negation of all colour, could not be distinguished by him from a bottle-green colour, in one instance, though the difference was quite obvious to myself. Black, white, and yellow bodies are, however, recognized with tolerable certainty, though the shades of white, which, again, is but the beam of all colours, are not distinguishable. The shades of *green* can be distinguished from each other, as already stated, though none of them are known from orange. Duck green he called a red, and sap green an orange colour. If he closed one eye, and looked with the other, the results were not altered.—His health has been good. This defect has not sprung from disease; it bears no relation to nyctalopia or amaurosis, only in its probable seat; it is natural, not morbid.

* It is remarkable that green, which is the softest of colours and composed of yellow and blue, should be mistaken for orange, on every substance except on grass.

Description of Eyes.

Mr R. Tucker's eyes appear to be very well formed, being oblate spheroids, with corneæ neither remarkably convex nor flat. Irides light ash-colour. His vision is exceedingly acute. It has been frequently exemplified in finding birds' nests, in shooting small birds, and in reading minute print at a short or long distance. Light appears to him as light. He sees the forms of surrounding objects, like other people, at noon-day, in the twilight, and at night. In short, his sight is remarkably good in any light, or at any distance. His grandfather, on his mother's side, seems not to have possessed the faculty of distinguishing colours with accuracy.

General Remarks.

Physiologists may speculate in opinion, whether or not this deficiency in the faculty of perceiving colours, as exemplified in the instance of Mr R. Tucker, depended on the eye, as the instrument and organ of vision, or on the sensorium, to which all impressions made on the retina of the eye are referred, and in which the faculty or power of discriminating colours is supposed to reside. Vision, regarded as a sensation, is only one medium of communication, which the brain, or common sensorium, has with the external world. The other senses afford other media. If an eye sees objects clearly, distinctly, and quickly, vision cannot be considered defective. The faculty, whatsoever it may be, wheresoever it resides, of discriminating the differences between different objects, certainly is not confined to the eye. The eye is but an optical instrument, serving to the purposes of vision. The judgment exercised upon the visual sensations is an after process, and resides not in the eye. Still, however, the construction of the visual organ modifies the appearances of objects presented to it. All

eyes do not see equally well in the same light; nevertheless, there is a standard of vision, which we call common. A difference in the vision of eyes depends, not unfrequently, on the colours of the iris and tapetum. In Albinoes, the iris is red. They cannot see distinctly in the day-time, because the red rays of the sun are possibly reflected, while the rest may be absorbed. It is probable, that the red rays may be reflected from the iris, when most closed, in Albinoes, because in them, there is a deficiency in the pigmentum nigrum, or black coating which covers the choroid tunic, and which being wanting, allows the rays to be more reflected and less absorbed, than they are in human eyes generally. Hence, the pupil is almost closed in Albinoes. Red, we know, strikes the eyes most forcibly, as it is the least refrangible colour. In optics, it is proved, that red bodies reflect the red rays, while they absorb the rest; and green colours reflect green rays, and possibly the blue and yellow, but absorb the rest. Still, however, the consciousness of colours does not depend on the colour of the iris, because one person, having a dark iris, and another a light grey, can distinguish colours equally well; nor on the tapetum, by the same rule, though the use of this coloured matter in the eye is not well made out. Herbivorous animals, as the ox, are supposed to have the tapetum in their eyes, of a greener colour than carnivorous, in order to reflect the green colour of the pasturage. But this explanation, given by Monro *primus*, does not hold good; for the hare, whose tapetum is of a brownish-chocolate, and the stag, which has a silvery-blue tapetum inclining to violet, are equally herbivorous with the ox. In man, and apes, the tapetum is of a brown or blackish colour; in hares, rabbits, and pigs, it is of a brownish-chocolate. The ox has the tapetum of a fine green-gilt colour, changing to a celestial blue; the horse, goat, and

stag, of a silvery blue, changing to a violet; the sheep of a pale-gilt green, sometimes bluish; the lion, cat, bear, and dolphin, have it of a yellowish-gilt pale; the dog, wolf, and badger, of a pure white, bordering on blue. The use of the tapetum, and of the *pigmentum nigrum*, can scarcely be said to be known. We can only infer, that the tapetum, if white, might reflect all the rays, and absorb none; and if black, as in man, it should absorb all the rays, and reflect none.—" Il est difficile," says CUVIER, " de soupçonner l'usage d'une tache si éclatante dans un lieu si peu visible, MONRO, et d'autres avant lui, ont cru que le *tapis* du bœuf est vert, pour lui représenter plus vivement la couleur de son aliment naturel; mais cette explication ne convient pas aux autres espèces." CUVIER, *Leçons d'Anat. Comp.* tom. ii. 402. Birds and fishes may perceive colours as well as animals, though they have no tapetum. The vision of man is regarded the most perfect; and defective vision in old people is sometimes produced by a deficiency of the black paint. These considerations do not, however, lead us to suppose, that the faculty of distinguishing the harmony of colours depends on the eye, any more than the concord of sounds does on the ear. The eye and the ear can be regarded only as instruments for bringing the sensorium, or thinking principle of man and animals, acquainted with whatever is visible or audible. The faculty, therefore, must reside elsewhere. Quickness of vision never made a NEWTON, nor delicacy of hearing a HANDEL, nor fineness of touch a REYNOLDS, nor acuteness of smelling a DAVY, nor accuracy of taste any philosopher whatever. For, all that man sees, hears, touches, smells, and tastes, constitutes only a specific difference in his sensations. These several sensations are compared, judged of, and distinguished from each other, by some internal principle which does not reside in the organs themselves. It is this prin-

ciple, or discriminating faculty of colours, which is wanting in Mr R. Tucker. Pressure made on the optic or auditory nerves entering the brain, will paralyse these organs which can neither see nor hear, unless their communication with the brain be preserved. Amaurosis sometimes arises from disease in the brain, and deafness from a similar cause. The brain is the sensitive centre, which feels all the sensations of light, sound, odour, and taste. In palsy, the latter is often annulled *. In the instance of Mr R. Tucker, there is no evidence whatever, to lead a person to suppose that defect exists in the functional office of his eyes, for his vision is quick above par. Where, therefore, does the fault lie? His eyes do their office, but the subsequent processes of perceiving, judging of, comparing, and remembering, (as confined solely to colours, his other faculties being perfect), are deficient. We must seek the explanation, therefore, in physiological, and not in optical, science, for the phenomena do not depend on the mechanical construction of his eyes.

Looking to the brain as the organ of the various mental powers, we may fairly infer, that these differences, discoverable in the faculties or capacities of individuals, are referable to some peculiarity in its structure and organization. Whilst physiologists in general admitted, I believe, this theory, it was not surprising that Drs Gall and Spurzheim should have directed their analytical powers of investigation, in an especial manner, to the brain itself, nor that they should have brought together the leading pheno-

* I have lately dissected the brain of a lady who died of Apoplexy. Her first symptoms were, partial privation of vision, the sensation of objects like flies of different colours dancing to and fro, of flashes and sparks of light before the eyes, of dizziness and confusion. The anterior and middle lobes of the brain were here affected. These morbid affections bear an affinity to natural deficiencies in the cerebral conformation, and shew us where to look for an explanation of mental incapacity and a want of proper perception.

mena connected with its functions. As patience and perseverance have elucidated so many abstruse points in anatomy, and solved such hidden phenomena in mental agency, these *prosecteurs* were doubtless encouraged in the laborious task they had undertaken, and led to hope, that, by their continued industry in unravelling the cerebral masses of man and animals, these organs which appeared to common observers as connected and inseparable in their structure, would admit of division, and that the different compartments, arbitrarily divided, might be found to comprise the material seats of so many distinct faculties *. Fair and delusive, perhaps, was the expectation; correct and indisputable, however, are many of their facts and histories. I do not profess to analyse their labours; I acknowledge myself incompetent to embrace all their views; but I speak with confidence, so far as one instance goes, that these anatomists appear to have discovered the true situation of the organ of colours, over the arch of the eye-brows.

In comparing Mr Robert Tucker's cranium with casts, and with the plates in Dr Spurzheim's book, I was forcibly struck with the flatness of his os frontis, at the place in the orbitary ridge where the organ of colouring is said to be situated; and this flatness, it is well known, indicates a small development of the organ.

In reciting this case, and in offering such comments on it, as the premises appear to me to warrant, I have no wish to provoke discussion, but merely to state the truth, so far as I have observed it.

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* The Committee charged with superintending the printing of the present volume think it proper to remark, that, at the time Dr Butter wrote the observations in the text, he was not a member of the Society, and that the article was originally intended for a different publication. He appears not to have been, then, correctly informed concerning the principles on which the founders of Phrenology proceeded. These are stated at length in the Preliminary Dissertation.

The following quotation from his book will shew, that Dr SPURZHEIM had collected instances similar to it. In page 363, he says, "Certain persons are almost destitute of "the power of perceiving colours. We know a family, of "which all the individuals distinguish only black and white. "Dr UNGER of Altona could not perceive green and blue; "and a boy of Vienna, who wished to become a tailor, was "obliged to abandon this trade, because he could not dis- "tinguish different colours. Those persons who do not "perceive colours, have sometimes the sense of vision very "acute, and readily perceive the other qualities of external "bodies, as their size and form. Indeed, the faculty of "perceiving the harmony of colours is totally distinct from "that of form; for there is nothing more common, than "that a painter should be an admirable draughtsman, and "a vile colourist."

In the Philosophical Transactions of London for 1777, there is published a case, communicated by Mr HUDDART to Dr PRIESTLEY, of one HARRIS, a shoemaker, at Maryport in Cumberland. This man could discern the form and magnitude of all objects distinctly, but could not distinguish colours. Harris had three brothers affected with the same peculiarity of vision as himself. I do not seek to multiply these instances, as I believe that they are not uncommon.

The organ of colours, Dr SPURZHEIM states, is more conspicuous in women than in men, and the former exhibit a greater variety of colour in their dress and furniture, and are more fond of flower-gardens than men. The Chinese, who are great colourists, have their eye-brows much arched. Indeed, it seems to me, that the evidence is more than presumptive of a flatness of the eye-brow, denoting the absence of certain faculties, that of distinguishing colours as one, and of a prominency pourtraying their presence and capabilities.

The foregoing communication (with some additional phrenological observations, of a general nature, which are here omitted, being familiar to Phrenologists, although not unsuitable for a journal intended for general readers) was sent by me to Dr BREWSTER, for insertion in the Edinburgh Philosophical Journal. Dr BREWSTER, without communicating with me, was pleased to alter the title of the article from that which it now bears, and to print it in his Journal, as, "Remarks on the *Insensibility of the Eye* to certain colours," by JOHN BUTTER, &c. He also suppressed the Phrenological Comments, and added the following Note, titled,

"OBSERVATIONS ON THE PRECEDING PAPER, by "*Dr Brewster.*"

"From the facts described in this very interesting paper, "Dr BUTTER has concluded, that Mr R. TUCKER's imper- "fect vision of colours has a *physiological*, and not an *op-* "*tical* origin; and he proceeds, in the conclusion of his pa- "per, (which, for obvious reasons *, we have omitted), to "fortify this conclusion, by the statement, that Mr R. "TUCKER is particularly defective in the organ of colours.

"In giving an account of the case of Mr DALTON and "others, whose eyes have an imperfect perception of colours, "Dr THOMAS YOUNG has remarked, (in opposition to Mr "DALTON's opinion, that the vitreous humour of his own "eye is of a light blue tinge), 'That it is much more simple

* "We have received various phrenological communications for insertion "in this Journal; but, independently of the opinion which we entertain of "this branch of modern study, we could make no apology to our readers for "inserting such articles, when we are obliged to omit one-half of the papers "that are sent to us on subjects of substantial science."

" ' to suppose the absence or paralysis of those fibres of the " ' retina, which are calculated to perceive red.'

" With regard to the existence of fibres in the retina, " suited to the perception of different colours, we have no " evidence; but it seems quite sufficient for the explanation " of the leading facts, to suppose that the retina is insensi- " ble to certain colours.

" Dr WOLLASTON, in his interesting paper on sounds in- " audible to certain ears, has shewn, that ears, both of the " young and of the old, which are perfect with regard to " the generality of sounds, may, at the same time, be com- " pletely insensible to such as are at one or the other ex- " tremity of the scale of musical notes; and I have lately " ascertained, that some eyes, which perform all the func- " tions of vision in the most perfect manner, are insensible " to certain impressions of highly attenuated light, which " are quite perceptible to other eyes. Dr WOLLASTON has " given the most satisfactory explanation of this partial in- " sensibility of the tympanum; and I conceive, that the in- " sensibility of some eyes to weak impressions of light, re- " quires no other explanation, than that, either from origi- " nal organisation, or some accidental cause, the retina of " one person may be less delicate, and less susceptible of " luminous impressions, than the retina of another, without " being accompanied with any diminution of the powers of " vision. If a sound ear, therefore, may be deaf to sounds " of a certain pitch, without our looking for the cause of " this in the form of any part of the brain, why should we " appeal to such an uncertain guide for an explanation of " the analogous phenomenon of the insensibility of the eye " to certain colours?" (The Edinburgh Philosophical Journal, vol. vi. p. 140).

Although I felt much honoured, by Dr BREWSTER keeping back my explanation of Mr TUCKER's defect, and sub-

stituting these observations of his own, I trust I may be permitted to offer a few remarks upon his comments.

In the instance of Mr Robert Tucker, I could have multiplied the examples already given of his non-perception of colours. He knew not blood on a spaniel's neck from dirt, until he was told, and had seen the wound in the dog's ear; and he called the beautiful crimson-colour of the flower of Pyrus japonica green. He has lately read the account given of Mr Dalton's case in the Manchester Memoirs, (See vol. v. part 1.), and considers the principal facts therein cited precisely parallel with his own. Mr Dalton is, however, shortsighted, and Mr R. Tucker's vision, as already stated, is very quick. Since the publication of his case, Mr R. Tucker has visited Paris, and presented himself to Dr Spurzheim, who considered his case similar to all others of this description, excepting the quickness of his vision.

Miss B., a lady of Plymouth, has lately informed me of another instance of one of her relations, a gentleman, who knows not the real colour of bodies. I have also heard of two other examples which I need not give, one of Miss M., the daughter of the late General M. An account has been published of a limner in Edinburgh, who painted a man with a green beard and blue cheeks. (See Memoirs of Manchester Society, vol. v. part. i. 1798.)

The instances of persons in whom the faculty of perceiving colours is wanting, are thus sufficiently numerous. Objections are not opposed to the facts, I conceive, but to reasoning advanced on them.

Dalton's theory is, That one of the humours of his eye must be a transparent, but coloured medium, so constituted as to absorb red and green rays principally. He suspects that the vitreous humours may be a modification of blue.

If we look through a pair of green or blue glasses, we still can recognise every primitive colour on bodies, with a shade of blue or green over them; and, although we look through a coloured medium, yet we know other colours: therefore, supposing the rays of light passed through a green or blue vitreous humour, it does not follow that the object, from which the rays emanated, should appear intrinsically to be either blue or green. A simple experiment does away with DALTON's theory.

Dr THOMAS YOUNG, on the other hand, says, "It is "much more simple to suppose, the absence or paralysis "of those fibres of the retina which are calculated to per- "ceive red." Now, had such fibres of the retina existed, or admitted of discrimination from other fibres of the retina, Dr YOUNG ought to have first demonstrated them, otherwise his theory has no foundation. I have never heard of an anatomist who has yet made out those fibres, or even had curiosity to look for them.

Dr WOLLASTON, whose high opinion has received the concurrent and able support of Dr BREWSTER, in his interesting paper, published in the Transactions of the Royal Society of London, for 1820, on sounds inaudible to certain ears, supposes, that some ears may be perfect to the generality of sounds, and yet insensible to those which are at the extremity of the scale of musical notes. This may be true; but are we hence to infer, with Dr BREWSTER, "*that the* "*insensibility* of some eyes to weak impressions of light, "requires no other explanation, than that, either from origi- "nal organization, or some accidental cause, the retina of "one person may be less delicate, and less susceptible of lu- "minous impressions, than the retina of another, without "being accompanied without any diminution of the powers "of vision?" If this hypothesis be verifiable, we must ask, What is the original organization of the retina? Is it de-

monstrable? What is the cause which produces that delicacy and susceptibility essential to the right perception of colour? The opticians have never shewn any cause, and the Phrenologists state facts which they have observed.

II.—*Case of Deficiency in the Power of Perceiving and Distinguishing Colours, accompanied with a small development of the Organ, in Mr* James Milne, *Brass-founder in Edinburgh.*

By Mr George Combe.

(Read 28th November 1822).

Mr Milne's grandfather, on the mother's side, had a deficiency in the power of perceiving colours, but could distinguish forms and distance easily. On one occasion, this gentleman was desirous that his wife should purchase a beautiful green gown. She brought several patterns to him, but could never find one which came up to his views of the colour in question. One day he observed a lady passing on the street, and pointed out her gown to his wife, as the colour that he wished her to get; when she expressed her astonishment, and assured him, that the colour was a mixed brown, which he had all along mistaken for a green. It was not known till then that he was deficient in the power of perceiving colours.

Neither Mr Milne's father, mother, nor uncle, on the mother's side, were deficient in this respect; so that the im-

perfection passed over one generation. In himself and his two brothers, however, it appeared in a decided manner; while in his sisters, four in number, no trace of it is to be found; as they distinguish colours easily. Mr SPANKIE, a cousin, once removed, has a similar defect *.

Mr MILNE is rather near sighted, but never could find glasses to aid his defect. He rather excels in distinguishing forms and proportions; and although he cannot discover game upon the ground, from the faintness of his perception of colours, yet he is fond of shooting; and when a boy, was rather an expert marksman, when the birds were fairly visible to him in the air. He sees them, however, only in the sky-light; and last year, when a large covey of partridges rose within ten or twelve yards of him, the back ground being a field of Swedish turnips, he could not perceive a single bird. His eye is decidedly convex to a considerable degree.

Mr MILNE's defect was discovered in rather a curious manner. He was bound apprentice to a draper, and continued in his service for three years and a half. During two years, he fell into considerable mistakes about colours, but this was attributed to inexperience and ignorance of the names of the shades merely. At length, however, in selling a piece of olive corduroy for breeches, the purchaser requested strings to tie them with; and Mr MILNE was proceeding to cut off what he considered as the best match, when the person stopt him, and requested strings of the same colour as the cloth.

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* I have examined the heads of Mr MILNE's brothers, who are deficient in the power, and in them the organ is evidently little developed. I have also examined its development in one of his sisters, and found no deficiency, but rather a fulness in the organ. Mr LYON, a member of the Society, states, that he has examined the head of Mr SPANKIE, and found the organ rather deficient.

Mr MILNE begged him to pick out a colour to please himself; and he selected, of course, a green string. When he was gone, Mr MILNE was so confident that he himself was right, and the purchaser wrong, in the shade that he had chosen, that he cut off a piece of the string which he intended to give, and a piece of that which had been selected, and carried both home, with a piece of the cloth also, and shewed them to his mother. She then told him, that *his ribbon* was a *bright scarlet*, and the *other a grass green*. His masters would not believe in any natural defect in his power of perceiving colours; and it was only after many mistakes, and some vituperation, that he was permitted to resign the business, and to betake himself to another, that of a brass-founder, to which he had a natural disposition; for he had used the turning-loom in constructing play-things, when a mere boy.

As to the different colours, he knows blues and yellows, certainly; but browns, greens and reds, he cannot distinguish. A brown and green he cannot discriminate or name when apart; but when together, he sees a difference between them. Blue and pink, when about the same shade, and seen in day-light, appear to him the colour of the sky, which he calls blue; but seen in candle light, the pink appears like a dirty buff, and the blue retains the appearance which it had in day-light. The grass appears to him more like an orange, than any other coloured object with which he is acquainted. Indigo, violet and purple, appear only different shades of one colour, darker or lighter, but not differing in their bases. He never mistakes black and white objects: he distinguishes easily between a black and a blue, and is able even to tell whether a black be a good or a bad one. In the rainbow he perceives only the yellow and the blue distinctly. He sees that there are other shades or tints in it, but what they are he cannot distinguish, and is quite

unable to name them. In day-light crimson appears like blue or purple, but in candle-light it seems a bright red.

When in Glasgow, his greatcoat was carried off from the travellers'-room by mistake, and on inquiring at the waiter what had become of it, the question was naturally put, what the colour of the coat amissing was? Mr MILNE was quite puzzled by the interrogatory; and although he had worn it for a year, he could only reply, that it was either snuff-brown or olive-green, but which he could not tell. The waiter looked as if he suspected that Mr MILNE wanted to get a coat instead of to recover one; but the coat was found; although even yet Mr MILNE is not able to tell the colour. He is apt to mistake copper for brass, unless he distinguish them by the file.—I submitted the above statement to Mr MILNE, and he certified it as follows:

"Having heard this paper read over, the circumstances "related are perfectly correct. JAMES MILNE.
"*Edinburgh, 26th November* 1822."

I beg leave to lay before the Society, a cast of Mr MILNE's head (27. Busts), and to intimate, that he has kindly consented also to attend this evening, and is now present. You will perceive by the cast, that the organs of Form, Size and Constructiveness, are well developed; while that of Colouring is decidedly deficient; there being a depression in the part corresponding to this organ, into which the point of the finger falls, on passing it along. As a contrast to it, I beg to refer the Society to the mask of Mr DOUGLAS, miniature-painter (No. 49. masks), and on comparing the extent to which the organ in question differs in the two, you will perceive it to amount to about a quarter of an inch. The masks of Mr DAVID WILKIE (No. 19.), Mr HAYDON (No. 20.), and Mr WILLIAMS (No. 21.), all eminent paint-

ers, may also be compared with Mr MILNE's, in regard to this organ.

As phrenologists are sometimes supposed to see differences by the aid of fancy, which are not distinguishable by men endowed with only ordinary powers of perception, I beg to suggest to the Society a very simple experiment in regard to this case. Mr PATRICK GIBSON, landscape-painter, a member, is now present. Let us place him and Mr MILNE behind the screen, at the door, and cover the head of each with a handkerchief. Several visitors are present, who probably are strangers to the persons of both. Some of these gentlemen may be requested to feel the heads of the two at the organ in question, through the handkerchiefs, and if they do not distinguish them by this mark alone, we may allow it to be said that no difference exists.

(This experiment was accordingly performed, in presence of the Society, and a number of visitors; and more than half a dozen of gentlemen, who were strangers to Mr GIBSON and Mr MILNE, named them respectively and correctly, by feeling their heads at the part indicated.)

Cases of a similar nature are not rare: I beg to add that of Mr SLOANE of Leith, in whom the power of distinguishing Colours, when presented separately, is deficient, and in whom an imperfect development of the organ also occurs.

The mask No. 33. is that of Mr SLOANE, and it coincides with that of Mr MILNE, in presenting a small development of the part marked as the organ of Colouring: In a letter, dated 20th February 1822, addressed to me, this gentleman says, "When I see a piece of tartan, or any other "complication of colours, I can easily distinguish the dif-

" ference of shades; but were the different colours present-
" ed to me singly, I could not say which was which. I feel
" particularly at a loss to distinguish betwixt green and
" brown, and likewise betwixt some shades of red and blue.
" I am not sensible of being deficient in seeing any thing at
" a distance, or of being unable to perceive as small a par-
" ticle as the generality of men can do." In this mask, the deficiency is not so great as in the cast of Mr MILNE, but the organ of colouring is greatly less developed in it than in the masks of the painters before alluded to.

The proper way to observe the development of this organ, is to distinguish to what extent the centre of each eyebrow projects forward. In Mr MILNE it is slightly depressed below the neighbouring parts; in Mr SLOANE, it is scarcely depressed, but it does not project, so as to overhang the eyeball; in the painters it is large and prominent, forming a heavy shade above the eye.

Mr SLOANE also mentions in his letter, that he is " very
" deficient in music;" and on comparing the development of the organ of Tune in his head, with its appearance in the mask of Mr MACVICAR (No. 39.), who told me that he is passionately fond of music, and whose powers were certified by a gentleman with whom I am well acquainted, a great difference will be perceived; the organ being greatly larger in the latter than in the former.

In the Medico-Chirurgical Transactions, Vol. vii. Part ii. p. 477., an account is given by WHITLOCK NICHOLL, M. D. of Cowbridge, of a " Curious case of Imperfection" of Vision, of which the following is an abstract.

" The subject of the present case is a boy eleven years
" old, lively and healthy. His eyes are grey, with a yel-
" low tinge surrounding the pupil. He does not call any
" colour green. Dark bottle-green he calls brown, con-

" founding it with certain browns. Light yellow he calls " yellow; but darker yellows, and light browns, he con- " founds with red. Dark brown he confounds with black. " Pale-green he calls light-red; common green he terms " red. Light-red and pink he calls light-blue; red he calls " by its proper name. Blue, both dark and light, he calls " blue. On looking through a prism, he said he could dis- " cover no colours but red, yellow and purple," &c.

" This boy has four sisters, in neither of whom does this " imperfection of sight exist. He has an infant brother, of " whose vision nothing of course can as yet be known. The " peculiarity of sight as to colours is derived from his mother, " in whom, however, it does not exist; she has a sister who " is also free from it; but she has no brother. Her father, " who is now living, has this imperfection of vision. This " gentleman, CHARLES ———, had two brothers and three " sisters; one of the brothers (JOHN) had also this peculi- " arity, but the other brother, and all the sisters, were with- " out it. CHARLES was in the Navy; and several years " ago he purchased a blue uniform coat and waistcoat, " with *red* breeches, to match the blue. JOHN ——, the " brother of the boy's grandfather, has mistaken a cucum- " ber for a lobster, and a green leek for a stick of red seal- " ing-wax."

No theory is offered to account for these facts.

Another case of defective power of distinguishing Colours, is communicated by WHITLOCK NICHOLL, M. D. of Ludlen Medico-Chirurgical Transactions, Vol. ix. Part. ii. p. 359.

The subject of the case is a gentleman residing near Mauchline in Ayrshire; and he recites the facts himself.

" My eyes," says he, " are of the same colour with the " youth's you mention, grey, with a yellow tinge round the " pupil; the pupil is rather small, but not remarkably so. " The colour I am most at a loss with is green; and in at- " tempting to distinguish it from red, it is nearly guess- " work. Scarlet, in most cases, I can distinguish; but a " dark bottle-green I could not, with any certainty, from " brown. Light-yellow I know; dark-yellow I might con- " found with light brown, though, in most cases, I think I " should know them from red," &c.

" The only advantage I have observed from this pecu- " liar vision is, that I see objects at a greater distance, " and more distinctly in the dark than any one I recollect to " have met with. This I discovered many years before I was " aware of my defective error in colours. I am in the 49th " year of my age, and I do not find my sight getting dim, " as it generally does in persons before that time of life.

" I am the youngest of a family of ten children, nine of " whom arrived at maturity. I had a brother who died in " 1791, and who, I since find, could not distinguish co- " lours," &c.

No theory of this case is offered.

In treating of the external senses, Dr Spurzheim states, that the eye perceives only modifications of light, and that internal faculties perceive colour, form, size and distance. The same doctrine is fully explained in the Essays on Phrenology, p. 126. I have met with a case which throws some light on the subject; and shall quote it from a memorandum, dated 26th May 1821.

Mr F. is tutor in the family of Sir G. S. Mackenzie. He stated, that he had a difficulty in " understanding a " landscape" in a picture; and explained, that " it appear- " ed to him to present a groupe of objects on a plain sur-

" face, without any perceptible fore or back ground." He attributed this defect in his perceptions to the circumstance of his not having learned the rules of perspective at school. In the course of farther interrogation, he stated, that he sees the forms of objects distinctly, as also their colour; that he likes brilliant tints best, and that in nature he perceives distance also. He has visited Rosslin, (in the neighbourhood of Edinburgh), and not only perceived the varying loveliness of hill and dale, of " fountain and fresh " shade," which characterises that delicious spot, but enjoyed its beauties with a keen relish. He has also seen many pieces of Highland scenery, and enjoyed them. Rivers, meadows or trees, or cultivated ground, are, however, the objects which interest him most. On turning his back upon any natural landscape, or shutting his eyes upon it, his recollections instantly become very confused. He is not able to recall in his mind the " relative positions" of the objects; while he distinctly recollects the *pleasing impressions* which they had made upon him; this remembrance does not soon fade. His *recollection* of Rosslin, for example, is like that of a confused picture of rocks and trees, and a river winding through them; but his remembrance of the impressions of grandeur and beauty, made upon him by the objects, is vivid and distinct.

For a long time I could not satisfactorily account for this curious deficiency of mental power. Mr F. permitted a cast of his face and forehead to be taken (No. 22. Masks,) and in it the organ of *Size* appeared to be decidedly small, and Form and Locality not very fully developed; while, by examining his head, it appeared, that Ideality, Wonder, Benevolence, and the organs of the other sentiments, and also of the intellectual powers, were nowise deficient; but to which of the three organs of Size, Form,

or Locality, the imperfection ought to be ascribed, I was at a loss to determine.

Subsequently, however, Mr Douglas, a member of the Society, already mentioned, stated in conversation, that one of the earliest indications of a liking for painting which he had manifested, was an extraordinary interest in matters connected with perspective. When a mere child, the appearance of approach in the far end of ploughed ridges puzzled him exceedingly, and he crawled across the fields, before he could well walk, to measure the actual distance betwixt each ridge with a stick, and was lost in astonishment when he found that the space between each was actually the same at both ends, notwithstanding of the great difference which appeared between them to the eye. He continued from this time to take a great interest in perspective, as a quality in painting, and gave up landscape for miniature painting, not from inclination, but from motives of a different kind. On comparing his head with Mr Ferguson's, I found that, in the organ of *Size*, the difference was greater than in any of the other organs.

On subsequently examining the head of Mr P. Gibson, who is known to excel to a high degree in perspective, I again found the organ of *Size* very large. And, finally, in the head of a gentleman with whom I am intimately acquainted, this organ is developed rather below than above an average degree; and he stated to me, that, with the power of perceiving and recollecting distances with facility, he has nevertheless felt great difficulty in representing distance correctly on paper; and, while he understands the general theory of perspective, he could never learn to execute the rules by tact of hand, and gave up all attempts at drawing on this account.

From these cases, I am disposed to infer, that the organ of Size, marked No. 21. on the phrenological bust, is in

some degree connected with the power of perceiving perspective, and of representing distance in a picture; but this can yet be regarded as very little more than a conjecture, the instances now alluded to being infinitely short of that full demonstration on which alone the phrenologists admit the functions of organs as ascertained.

I may add, by way of explanation, that the organs and faculties of Form, Size, Locality, and Colouring, only serve to transmit the respective impressions received by them to the faculties of the higher sentiments and understanding; and that the latter, Ideality for example, or Benevolence, or Comparison, enable us to feel the emotions, or exercise the reflections which are called up in the mind, by the presentation of external objects, invested with magnificence or beauty; and that as the organs of these latter faculties are fully developed in the head of Mr F., the circumstance of his *emotions* being strong, and his recollections of them distinct, is easily accounted for on the principles of our science.

Perception is the result of the *lowest* degree of activity of each intellectual faculty and organ, and *memory* is a higher degree of activity. Thus, the faculty of Tune, in its lowest state of power, may enable an individual to *perceive* melody, when produced by others, but it may not be vigorous enough to enable him to *recal* the notes of a tune which he has only once heard. In like manner, the organ of Size seems to have been sufficiently developed in Mr F. to permit the lower manifestation of the faculty, that of *Perception* of distance, when objects in nature were presented, but not sufficiently so, to allow the higher degree of action to take place, that of *Memory*, or the act of recalling the conceptions of distance, when the objects were removed.

Remarks on Dr BREWSTER's *Note to Dr* BUTTER's *Communication.*

Dr BREWSTER thought it unbecoming to publish the *Phrenological Explanation* offered by Dr BUTTER, of the case of Mr ROBERT TUCKER, and assigned as a reason for withholding it, that, "independently of the opinion we "entertain of this branch of modern study, we could make "no apology to our readers for inserting *such articles*, "when we are obliged to omit one-half of the papers that "are sent to us *on subjects of substantial science.*" On this passage I beg leave to make a short comment: Dr BREWSTER's own "observations," which he *substituted* for those of Dr BUTTER, occupy nearly as much space in his Journal as the suppressed portion of the original communication would have done; and they ought, therefore, to have been *sounder and more satisfactory* in themselves, otherwise his readers were no gainers by the change. But, instead of being so, they are directly the reverse. Dr BUTTER states a plain and simple fact, that Mr ROBERT TUCKER's head is not fully developed in the part where Drs GALL and SPURZHEIM indicate the organ of Colouring to be situate; and this statement was *valuable*, just because it related to *fact*, and implied neither hypothesis nor conjecture. Dr BREWSTER, however, suppressing this fact, substitutes in its place,—a purely gratuitous hypothesis, a supposition of "the absence or paralysis of those fibres of the retina, "which are calculated to perceive red,"—a theory so perfectly destitute of proof, that he himself, in the very next sentence, proceeds to mention, that, "with regard to *the ex-* "*istence* of fibres in the retina, *suited to the perception of* "*different colours*, *we have no evidence*; but it seems *quite* "*sufficient* for the explanation of the leading facts, *to sup-* "*pose* that the retina *is insensible to certain colours.*" This, then, is a specimen of the *substantial Science!* which is worthy

of a place in the Journal of Dr Brewster. If the phrenologists had been guilty of penning such a sentence, this gentleman would have been one of the first to detect and expose so glaring a departure from the rules of just philosophising: One of the first principles of reasoning in physics is, that a cause is never to be taken for granted, and yet he here deliberately rejects positive evidence, and substitutes an assumption in its place. The conductors of the Edinburgh Philosophical Journal, says Dr B., can afford no room for phrenology, on account of papers sent to them "on subjects of *substantial Science!*" The world, I presume, is infinitely more interested in determining whether the "Chess-player" was a *man* or a *machine*, to which subject he devoted many pages of his work, than in discovering the functions of the Brain, or investigating the philosophy of the Human Mind!

VI.—*Notice of a Case in which the Patient suddenly forgot the Use of Spoken and Written Languages.*

By Mr Alexander Hood.

(*Read 23d January* 1823.)

R. W., the patient in this remarkable case, is a man of regular and sober habits, in the sixty-first year of his age, and by trade a blacksmith. His general health is good, though, for many years, he has been subject to severe headaches, which were uniformly referable to the sockets of the eyes and eye-brows. Some twelve or fourteen years ago, after much fatigue from a long walk in the night, he was affected with severe inflammation, pain, and much swelling in the submaxillary and parotid glands. While the inflammatory action was going on in the glands of the neck, the left eye was attacked with excruciating pains, which continued several weeks with little abatement. In the course of the disease, mercury had been prescribed freely, as the mouth and gums were much affected; but, at this distance of time, the other curative means have not been ascertained. When the complaint had continued for

two or three months, the swelling in the glands began to diminish, and the pain in the eye abated; but the function of the organ was about this time rather unexpectedly lost. The right eye sustained little injury; the swelling in the neck continued to diminish; and, about the end of the fourth month, the patient had, in every other respect, a good recovery. After a lapse of thirteen years, there is not at present any appearance of disorganization of structure, or opacity in the cornea or lens of the left eye, which can possibly occasion blindness. It seems, in fact, to have been infected with amaurosis.

On the evening of the 2d of September 1822, in the midst of his family, he suddenly began to speak incoherently, and became quite unintelligible to all those who were about him. The complaint, in the first instance, appeared to be pretty much like delirium, or the effects of liquor; with this remarkable difference, however, that the words which were uttered, were unconnected with the significations with which they are generally associated. On the morning of the 3d September, when I first saw him, he was in bed, and seemed to be somewhat confused; for, *though he could speak*, no general ideas could be collected from the words which were expressed, as he only rendered himself intelligible by signs. Being apprehensive of apoplexy, as there was some fever present, with a full strong pulse, upwards of ninety beats in the minute, I took fourteen ounces of blood from the arm; but he having become faintish, the wound was bound up, and leeches applied to the temples. A brisk purgative was also administered; and, towards the evening, the skin became cool, and the pulse moderate; but the mental affection remained the same, and it was now discovered that *he had forgotten the name of every object in nature*. His recollection of *things* seemed to be unimpaired, but the *names* by which *men* and *things*

are known, were entirely obliterated from his mind, or rather he had lost the faculty by which they are called up at the controul of the will. He was by no means inattentive, however, to what was going on; and he recognized friends and acquaintances perhaps as quickly as on any former occasion; but their names, or even his own, or his wife's name, or the names of any of his domestics, appeared to have no place in his recollection.

Under the serious apprehension that this strange mental affection might probably be the harbinger of death, he was extremely anxious to settle his affairs, and make his peace with the world. A gentleman who had often suggested to him the propriety of making a testamentary settlement, now occurred to his mind, though he could not, by any effort, call up his name. He laboured, with the utmost assiduity, more than an hour, to make his family understand whom he wanted, and ultimately succeeded in directing them to the individual, by depicting the number of houses and doors between his own house and that in which his friend resided. Thus directed, some one of the family asked him if it was such a one, naming the person that he wished to see. He seemed to be overjoyed, and signified, by various gesticulations, that this was the person, and that he was desirous his friend should be brought to him immediately. I was afterwards informed by the gentleman, that my patient had succeeded completely, by means of signs, hieroglyphics, and a few explanations from one of the family (who perhaps previously knew something of the old man's mind on the subject) in making known to him the manner in which he wished his children severally to succeed in the possession of their respective shares of his property. The same evening had been fixed for a committee meeting of a Friendly Society, of which he was a member; but, though he recollected the society, the meeting of com-

mittee, the time and place of meeting, and other circumstances connected with it, yet he had forgotten *all the words* by which these ideas are expressed. He seemed to regret much his inability to attend, and wished to convey this idea to his family; but could make them understand what he referred to, only by forming a circle with chairs, and placing one more conspicuous than the rest, indicative of the president's, by which his meaning was at last discovered.

On the morning of the 4th September, much against the wishes of his family, he put on his clothes, and went out to the workshop; and, when I made my visit, he gave me to understand, by a variety of signs, that he was perfectly well in every respect, with the exception of some slight uneasiness referable to the eyes and eye-brows. I prevailed on him, with some difficulty, to submit to the reapplication of leeches, and to allow a blister to be placed over the left temple. He took also a full dose of calomel and jalap, which operated well, having elicited, besides feculent matter, a copious discharge of bile. From this time, he declined all medical treatment, except taking occasionally a dose of salts. He was now so well in bodily health that he would not be confined to the house; and his judgment, in so far as I could form an estimate of it, was unimpaired; but his memory for words was so much a blank, that the monosyllables of affirmation and negation seemed to be the only two words in the language, the use and signification of which he never entirely forgot. He comprehended distinctly every word which was spoken or addressed to him; and, though he had ideas adequate to form a full reply, the words by which these ideas are expressed seemed to have been entirely obliterated from his mind. By way of experiment, I would sometimes mention to him the name of a person or thing. His own name, for example, or the

name of some one of his domestics,—when he would have repeated it after me distinctly, once or twice; but, generally, before he could do so a *third* time, the word was gone from him as completely as if he had never heard it pronounced. When any person read to him from a book, he had no difficulty in perceiving the meaning of the passage, but he could not himself then read; and the reason seemed to be, that he had forgotten the elements of written language, viz. the names of the letters of the alphabet. In the course of a short time, he became very expert in the use of signs; and his convalescence was marked by his imperceptibly acquiring some general terms which were with him at first of very extensive and *varied* application. In the progress of his recovery, time and space came both under the general appellation of *time*. All future events and objects before him were, as he expressed it, "*next time*;" but past events and objects behind him were designated "*last time*." One day being asked his age, he made me to understand that he could not tell; but, pointing to his wife, uttered the words "*many times*" repeatedly, as much as to say that he had often told her his age. When she said he was sixty, he answered in the affirmative, and inquired what "*time*" it was; but, as I did not comprehend his meaning distinctly, I mentioned to him the hour of the day, when he soon convinced me that I had not given him the proper answer. I then named the day of the week, which was also unsatisfactory; but, upon mentioning the month, and day of the month, he immediately signified that this was what he wanted to know, in order to answer my question respecting his age. Having succeeded in getting the day of the month, he then pointed out the "*time*" or day of the month on which he was born, and thereby gave me to understand that he was sixty years of age, and five days or "*times*," as he expressed it.

After the fourth or fifth day from the attack of the complaint he attended the men in the workshop regularly, and occasionally did little jobs himself. As his general health seemed to have sustained no perceptible injury from the mental affection, and his judgment remaining clear, he was extremely anxious to recover the power of reading and writing. In his desire to become again acquainted with written language, he had recourse to books with more than school-boy assiduity. About the middle of September, when he had recovered the use of several vocables, and could even sometimes go so far unassisted as to write the one half of his own name, by way of trying his memory, I asked him the name of an object with which I knew he was familiar; but after a long pause he could give me no answer. When I mentioned the name, he pronounced it distinctly twice or thrice after me; but with every effort he could make, in the space of a few seconds it again slipt from his memory. It was no uncommon thing with him to remember one-half of a word, and not the other; *ham-* for instance, instead of the whole word *hammer*. In as far as my observation goes, he always recollected in the order of pronunciation, and never the last part of a word without the syllables preceding.

October 8. His memory is now very much improved; he remembers his own name, and the names of many of his friends and acquaintances, and can read an advertisement without much difficulty. There are still many words, however, which he cannot recollect, though the things designated by them be perfectly familiar to him, and which he cannot retain in his memory more than a few seconds. The word *tongs* is an example of this kind, notwithstanding, as he observes, that he has been handling them these fifty years.

December 28. He can now support conversation tolerably, though in many respects his memory is still very defective. It often happens, that in jotting down accounts in his book, a syllable or two of the leading word is all that he can write at the time; but he assures me, he never fails in marking the price correctly; and some hours afterwards, or perhaps the following day, he returns and fills up the unfinished word or sentence just as his memory serves him.

Observations.

The patient R. W. was possessed of the ordinary knowledge of written and spoken language before this attack. I have known him for ten years, and, although he never seemed to be possessed of much oratorical talent, he had no difficulty in making himself distinctly understood. His son assures me, that his written correspondence was characterised by perspicuity, distinctness, and brevity. He never was taught arithmetic, but he could solve readily, by mental calculation, questions of much intricacy, and, what is more remarkable, without almost ever making a mistake even in the minutest fraction. In contracting by specification for the iron-work of large buildings, all his calculations were made in this way, and the general result only was put down in figures.

The facts of this case appear to be, in many points of view, extremely interesting, inasmuch as they seem to establish, beyond the possibility of doubt, that the brain must consist of a congeries of organs, or parts, each serving to manifest a particular faculty, and that to one or more of these particular parts is appropriated the function of recollecting words or names. It appears also to be evident, that this portion of the brain may have its function suspended or destroyed, without the judgment being impaired, or the

recollection of facts, circumstances, and events, being effaced from the mind. If the brain were a single organ, and every part of it necessary to each mental act, such cases could not occur; for it could not be both perfect and imperfect at one and the same time. The organ of artificial language has been pointed out by Drs GALL and SPURZHEIM as "situated above and behind the eye." Now, the pain, in this case, was uniformly referable to that part of the head, so that, in as far as pain is indicative of the seat of disease, the observations of these gentlemen seem to be confirmed. It is scarcely possible to take a general view of the case, without considering the headachs or condition of parts in which they originated, the blindness of the left eye, and subsequent affection of memory, except in the relation of cause and effect. Objections may, no doubt, be started to this inference from the facts narrated, and it may be admitted that they perhaps do not *necessarily* stand in this relation: at the same time, it may be affirmed, without fear of contradiction, that deranged functions happening to any other organ or member of the body, preceded many years by frequent and excruciating attacks of pain, would justify the pathologist in taking this view of the subject.

In the works on Phrenology, the doctrine is laid down, that Perception is the result of the lowest, and Memory of a higher degree, of activity of each faculty and organ. In attempting, therefore, to account for the fact of his comprehending the meaning of words used by others, without being able to use them himself, it occurred to me, that the organs of verbal memory may have been paralytic, or in some analogous condition,—so that, although the power of ministering to sensation or perception was not destroyed, their energies were so much impaired as to render them incapable of performing the higher part of their ordinary

functions. During his convalescence, it was very obvious that he could recollect some words with facility, while, with his utmost efforts, he could not recollect others more than a few seconds. This fact induced me to believe, that, in the tissue of fibres composing these organs, the same degree of morbid action did not equally pervade them throughout, else there would have been more uniformity in his power of recollecting and using words with which he was equally familiar. The same fact also suggested the probability, that the whole phenomena of the disease might possibly be explained, on the supposition of the organs being double, and always acting uniformly and simultaneously, so that, when the one became diseased, or paralytic, the functions of the other were disturbed by sympathy. The two eyes and two ears being more immediately channels of communication with the material world, for the better accommodation of the animal, may reasonably be supposed to be more distinct in their functions than organs situated entirely within the cranium, and well protected from external injuries. When the function of an eye or ear, for instance, is suddenly destroyed, we are well aware of the embarrassment, which it often occassions to the suffering individual; but when the functions of internal organs are impaired or destroyed, much more confusion must arise, as may easily be conceived, from their intimate connection with each other, and the juxtaposition of parts. The conjecture, however, concerning the disease existing only on the one side, is hazarded, more with the view of exciting discussion, than from any settled belief entertained on the subject.

Observations on the same subject, by Mr G. Combe.

Dr Spurzheim mentions a case similar to the foregoing. He says, "J'ai vu, à Inverness, en Ecosse, un homme,

qui, étant frappé d'apoplexie, connoissoit les qualités des objets; qui se rappeloit les signes vocaux, mais qui ne pouvoit pas les prononcer. Si on lui montroit une couleur telle que la verte, et qu' on lui demandât si la couleur était brune, jaune, ou toute autre que verte, il répondoit que non; aussitôt qu'on nommoit la véritable couleur, il disoit qu' oui. Il faisoit de même aux figures des objets. J'ai observé un cas semblable à Paris. L'homme comprenoit tout ce qu'on lui disoit, mais il ne pouvoit pas trouver la prononciation des mots dont il avoit besoin. Il demandoit différens objets; si on lui apportoit la chose dont il avoit prononcé le nom, il répondoit, sur-le-champ; c'est, ou ce n'est pas cela. Ces phénomènes prouvent que les idées, et toutes les fonctions des facultés intérieures doivent être séparées des signes arbitraires, et qu'elles précedent les signes."—*Observations sur la Phrenologie*, p. 304.

Dr Gall also cites the case of a notary recorded by Pinel, who, after an attack of apoplexy, had forgot his own name, and that of his wife, children and friends, although his tongue preserved all its mobility. He could no longer read nor write, but nevertheless remembered objects which had formerly made an impression on his senses, and which related to his profession. He frequently pointed out with his finger, the files which contained documents that could not be found, and indicated, by other signs, that he preserved the former train of his ideas entire, ("Pinel sur l'Aliéna-" tion mentale, 2de édition, p. 105.") Dr Gall mentions also the case of a soldier sent to him by Baron Larrey, whom he found to be very nearly in the same condition as the notary mentioned by Pinel. "It was not his tongue" says he, "which was the source of his embarrassment," for he was able to move it with great agility, and to pronounce even a great number of isolated words. It was not

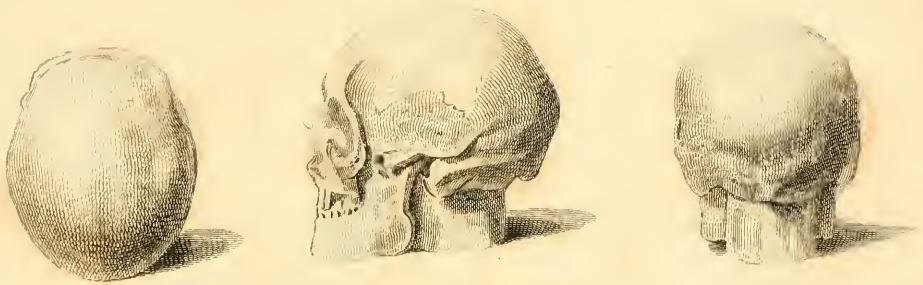
his memory either which was in fault, for he shewed evi dent dissatisfaction with himself, at not being able to express himself upon many subjects which he wished to mention. The only faculty in him which was impaired, was that of speech. This soldier, like the patient of Mr PINEL, is no longer capable of reading or writing, (" Phy- " siologie du Cerveau, v. iv. p. 84.")

Cases similar to these have frequently occurred in this country. A gentleman who attended the late Dr GREGORY's lectures in this city, has favoured me with the following extract, from notes which he took at the time.

" There are many various modifications in the loss of " the mental powers: one may be lost and not another. " Thus the memory of language may be lost, while that of " things remains. WEPFERUS mentions some instances of " this kind. I met with one in the case of a lady, who, " at the age of forty-two, had an attack of apoplexy, from " which she recovered remarkably, with this exception. She " had even forgot the letters of the alphabet. She had been " a good French scholar, but also forgot it completely; " yet she retained the memory of things, though from this " circumstance she could not express herself in words. " This was ascertained by different experiments, one of " which was to leave her in the house by herself, the other " ladies taking care to be out of the way; the cook came " to her for directions about dinner; she could not tell " her, but went alongst with her, and pointed out very " distinctly what she wanted, and how she would have it " served. She lived about thirty years after the apoplectic " attack. In another case, I could not get any answer " from the patient, merely because he had not the memory " of language. He could repeat any word after hearing " it, or read a part of a book after another, though he " could not by himself. In Dr REID's works, we find an

" account of a case somewhat similar. On the other hand,
" the memory of *things* may be very imperfect, while that
" of *words* is complete. This occurred in the case of a
" lady with whom I was acquainted. She could *talk* well
" enough, but forgot *things* so much, that she did not
" know her own son, and even identified him with his de-
" ceased father, forgot she was an heiress, by whom an
" estate had come to her son, and even where she was.
" I observed it also in a gentleman, who otherwise had a
" good recovery from hemiplegia. Such as these are ex-
" treme cases, but the approaches to them are by no means
" uncommon."

The actual condition of the part of the brain, which is observed by phrenologists to be connected with the faculty of language, does not appear to have been ascertained by dissection in any of the foregoing cases. The only inference, therefore, which can be legitimately drawn from them, is the one stated by Mr Hood, that different parts of the brain must, of necessity, have the function of manifesting different mental powers; and that the part which is connected with the faculty of using artificial language, is different from those parts which serve to manifest the powers by which the existence of external objects, their relations and qualities, are perceived and remembered. By calling the attention of physiologists to these facts, they may be led, by future dissections, to confirm or refute the conclusion which the phrenologists have already drawn from a great multiplicity of observations made during life, that the convolutions which lie on the middle of the supra-orbitary plates of the frontal bone, are the organs of language.



Three views of Skull of King Robert Bruce.

Drawn by Wm D. Edinr

Engd by C. Thomson Crofs Edinr

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VI.—*Remarks on the Cerebral Development of King Robert Bruce, compared with his character as appearing from History.*

By Mr William Scott.

AT the time when Phrenology was first beginning to attract attention in this country, it must certainly be regarded as a piece of extraordinary good fortune, that the discovery of the tomb of Robert Bruce, authenticated beyond the possibility of doubt *, should furnish us with the cerebral

* King Robert was the last sovereign of Scotland, whose remains are recorded to have been interred at Dunfermline. He was, according to Fordun, "Sepultus apud monasterium de Dunfermlyn in medio chori, debito cum "honore." His heart having been taken out, to be carried to the Holy Land by Sir James Douglas, was, on the death of that knight in Andalusia, conveyed back to Scotland by Sir William Keith, and afterwards buried at Melrose.

The church of Dunfermline, which occupied the nave of the ancient cathedral, having become ruinous, it was resolved, in 1817, to erect a new building, extending over and including the space occupied by the Royal Tombs. In the course of these operations, the workmen came, by accident, upon a vault in a line with the centre of the ancient choir, which was covered by two large flat stones. This having been opened, at first only so far as to ascertain its being a royal vault, was immediately closed again, and remained so, until the 5th November 1819, when it was laid fully open,

development of one of the most renowned monarchs, and one of the most justly celebrated men, whom this country, or whom the world, has ever produced. The opportunity thus afforded of illustrating the new science, and, at the same time, of exhibiting the true elements which formed the character of the great deliverer of Scotland, could not fail to be of the highest importance: and although, upon

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and its contents carefully examined in the presence of the King's Remembrancer, and of several of the Barons of Exchequer. It then appeared, without a doubt, to have been the tomb of King Robert Bruce.

The vault or grave was about seven feet long, of regular built masonry, situated within a larger vault. It contained a human skeleton, wrapped up in two separate coverings of lead. At the time the grave was first opened, there was at the top of this lead covering, something which had the appearance of a rude crown. Under this lead was a covering of linen cloth, interwoven with gold-thread, but which, on the second opening, was found in a state of great decay. The whole being removed from over the body, the skull was taken up, and found in a most perfect state. The *os hyoides* was entire, and several cartilages of the larynx were visible, from having, it is supposed, been ossified. The whole teeth in the under jaw were entire, and in their places; but there were four or five in the upper jaw wanting, with a fracture of the jaw-bone in front, probably occasioned by a blow which the King had received in one of his military adventures.

The most remarkable circumstance observed regarding the skeleton, was the state of the sternum, which was found to have been sawed asunder, from the top to the bottom. This was considered to afford additional evidence that the skeleton was that of Bruce, as this operation would be necessary to get at the heart, which, as already mentioned, was taken out, to be carried to the Holy Land.

The workmen, in the course of their operations a few days afterwards, found, among the rubbish of the vault, a plate of copper, which had escaped notice at the previous examination, having engraved upon it a cross bearing the inscription "*Robertus Scotorum Rex.*" Above the inscription is the figure of a crown; and, beneath it, a crosslet, with four stars or mullets inserted in the angles. The letters of the inscription resemble those on the coins of Bruce. Upon the whole, there cannot be conceived more satisfactory evidence of any fact of the kind, than that the skeleton thus discovered, was that of King Robert Bruce.

the first announcement of the cerebral development of Bruce, and without a sufficient attention being paid to his real history and character, some may have thought that it did not correspond with the exalted ideas they had entertained of his merit, I will venture, without much risk of contradiction, to affirm, that no cause exists for any feeling of disappointment on this account. I think it will appear, on a minute examination of the circumstances of Bruce's life, and of the times in which he lived, that the character indicated by the development, is not only borne out by the history in the closest manner,—but that, had that development been in any material respect different from what we find it, it would *not* have agreed with the history, and would have furnished grounds for impugning either the authenticity of the head, or the correctness of the principles laid down in the science.

The first point on which an objection has been stated, is the apparent deficiency in Bruce in the organs of the intellectual powers, as compared with those of some of the feelings, and particularly the animal propensities; and it has been asked, is it possible that there could have been any intellectual deficiency in so great a man? But here it is fit that we make proper distinctions. In Phrenology, two kinds of intellectual faculties are recognised; the first communicating the perceptive powers, the second the reflective. In Bruce's head, the organs of the first class are amply developed, and only the second are comparatively small. It is proper, therefore, that we consider what was the *kind* of intellectual power which Bruce exhibited, or which was necessary for enabling him to perform what he did. We must consider, in the first place, that Bruce did not live in an intellectual age. He was the head and ruler of a rude people, just emerging, for we cannot say that in his time they were actually emerged, from barbarism. Not to

mention the evidence of our own historians, which is sufficiently explicit upon this point, we may only allude to the testimony of FROISSART, a contemporary chronicler, and one whom there is no cause to accuse of unfairness. The account he gives of the Scots in BRUCE's reign, of their manner of making war, of their mode of encampment, of their living upon flesh in a half raw state, merely sodden in skins, and of their wearing shoes or buskins of untanned leather, is such as to wear the stamp of truth, while it mortifies us not a little at the low state of civilization in our ancestors of the fourteenth century. They seem to have been in a state little, if at all, superior to the Cossack tribes of the present day. This was the people whom BRUCE commanded, among whom and of whom he was born; and it surely cannot be thought surprising, nor imputed as a defect in the chief of such a people, that he is not found to be endowed with those higher reflective powers which are necessary for sounding the depths of science, or for pursuing to its consequences a long train of inductive reasoning. As yet Science was not. Colleges and schools had no existence in the land; printing was not invented; and all the learning of the age was monopolized by a few of the clergy, in so much that many distinguished nobles could not write, and probably could not read. The reasoning faculties of BRUCE were not exercised in his youth, by being imbued with the wisdom of the antients, and by having opened to his view the treasures of learning and the inexhaustible wonders of science. War and the chase formed in his time at once the school and the pastime of the noblest spirits. The duties of a monarch were in those days few and simple. They were chiefly, if not exclusively, "to go in and out before the people, and to fight their battles."

The head of Bruce was, soon after its discovery, examined by different phrenologists, and its development, as stated by them, has long been before the public. It certainly appears to me that they have, at least, not erred on the favourable side in this case; and, instead of bending the development to suit preconceived notions, and to raise the monarch in the scale of intellect, I rather think, with submission to them, they may have somewhat under-rated the reflecting powers of Bruce. He is admitted to have a large Individuality; and, I may add, (if we are right in holding that there are two organs included in this), that they are both largely developed in Bruce. It is laid down in the Outlines, and, indeed, in all the systems of Phrenology, that these organs give the talent of quick observation and tenacious memory for facts and occurrences presented to the senses; and, when joined to a favourable combination of the propensities and sentiments, they give that kind of judgment which is known by the name of sagacity, or common sense: for it must never be forgotten, that practical judgment is held, in Phrenology, to depend fully more on the power of feeling correctly, than of reasoning deeply. We have known many persons in whom we have observed these organs to be well marked, who, with a very moderate, or rather a small portion of what are called the reflecting faculties, possess a quick intuitive judgment in common affairs, are prompt to decide and to execute, and are hence better fitted for the ordinary business of life, than those whose high reflective faculties are far superior, but who enjoy less of these lower powers. Now, this was exactly the sort of talent which was required and exhibited by Bruce. There is nothing in his history which leads us to suppose, that, in point of intellect, he rose at all higher than good shrewd sense. There are many such men, who, though they want that comprehensiveness and subtlety of

mind which can pursue long trains of reasoning, and cannot even state the reasons of their conduct in a luminous and distinct discourse, yet never fail in discerning, as it were, by an intuitive tact, their own true interest, even in a view of the most complex affairs, and at once decide upon that course of conduct which is fittest for obtaining their ends. The talents for shining in reasoning and discourse, and those necessary for wise and decisive action, thus appear perfectly different. And if, on the one hand, we were to place the reflective and reasoning powers of BURKE or of BACON,—which are given only by a large development of the higher intellectual organs; and, on the other, that rapid and accurate perception, which is given by Individuality, with that tact of sagacious feeling, prompt decision, and energy of action, which are the results of a good combination of the propensities and sentiments; —and we were asked which of these kinds of talent was most likely to shine in the age of BRUCE, we would most assuredly answer, the latter. I have only to add on this subject, that, although what are called the higher intellectual organs, Comparison, Causality, and Wit, are by no means fully developed in BRUCE, as contrasted with the other parts of the head, this is more relatively than absolutely the case. The head is a very large one, and these organs appear small only in comparison with those of the feelings, which in him are very large; and when compared with the corresponding organs in a head of ordinary size, they will be found really not deficient. They are not actually smaller than are to be found in many persons of good sense and shrewd understanding at the present day: and we may be satisfied that, even in respect of these, BRUCE stood rather above than below the average of intellect among his countrymen in his own time. The head of BRUCE is altogether one of the largest which has come un-

der our observation; and it will be recollected, that, in perfect and healthy conformation, great size in the brain is held to indicate great power in the mind; the kind of power corresponding to the region of the brain which is most enlarged.

The next thing to be noticed is, the deficiency which has been remarked in the sentiments of Benevolence and Conscientiousness. It is true, that both of them are exceedingly moderate in Bruce, the last being particularly small. But this affords no objection. There is nothing in the history of Bruce which leads us to suppose that he possessed either of these sentiments in great vigour. There is no instance recorded in which he shewed any great regard for the happiness, or regret for the sufferings of others; and certainly none in which he made any great sacrifice, or suffered himself to be stopped in any of his plans, from a merely benevolent or conscientious motive.

But passing these topics, which really afford no objection either to the authenticity of the head or its correspondence with the character, we shall state the development as we find it, and afterwards add a few observations on the character and history of the illustrious person to whom it belonged.

1. Amativeness,—full.
2. Philoprogenitiveness,—large.
3. Concentrativeness,—rather full.
4. Adhesiveness,—large.
5. Combativeness,large.
6. Destructiveness,—large.
7. Constructiveness,—rather small.
8. Acquisitiveness,—moderate.
9. Secretiveness,—very large.
10. Self-esteem,—rather large.
11. Love of Approbation,—large.
12. Cautiousness,—large.
13. Benevolence,—rather small.
14. Veneration,—large.
15. Hope,—large.
16. Ideality.—moderate.
17. Conscientiousness,—small.
18. Firmness,—very large.
19. Individuality,—lower,—large.
——————upper,—full.
20. Form,—large.
21. Size,—large.
22. Weight,—uncertain.
23. Colouring,—moderate.
24. Locality,—rather large.
25. Order,—moderate.

26. Time,—uncertain.
27. Number,—uncertain.
28. Tune,—moderate.
29. Language,—uncertain.
30. Comparison,—moderate.
31. Causality,—moderate.
32. Wit,—rather small.
33. Imitation,—moderate.
Wonder,—moderate.

The size of the head will be seen from the following measurements, taken from the middle of the surface of each organ, as indicated on the skull.

	Inches.
From Philoprogenitiveness to lower Individuality,	8
Concentrativeness to Comparison,	6 5/8
Meatus auditorius externus (right side), to the junction of the occipital spine, with Philoprogenitiveness,	4 5/8
Do. to lower Individuality,	5
Do. to Firmness,	5 5/8
Destructiveness to Destructiveness,	5 7/8
Secretiveness to Secretiveness,	6
Cautiousness to Cautiousness,	5 5/8
Ideality to Ideality,	4 6/8

It will be obvious, to every phrenologist, on looking at this development, that the character which it indicates, is one (either for good or for evil,) of great energy and power. From the full endowment of Amativeness, and the large Philoprogenitiveness and Adhesiveness, we would conclude, (what we know to be the case from his history,) that he was a kind husband and father, attentive to the interests of his family, and disposed to enjoy the pleasures of private friendship and domestic society. His large Combativeness and Destructiveness were abundantly shewn by his prowess in battle, and also by that warmth of temper, of which many instances occur, and which might lead us to apply to him, what has been said of his country in general,

"Whoe'er shall provoke thee, th' encounter shall rue."

His Cautiousness and Secretiveness were shewn, not merely in the mode in which he generally attacked his enemies,

which was oftener by stratagem and surprise than in the open field, and by the general prudence of all his measures; but also in his power of dissembling, when he chose, his secret feelings, which we frequently find him doing, both with the English Monarch, in whose court he at one time resided; and in his intercourse with his own nobles, when in the height of his power. His full endowment of Self-esteem, and the large love of Approbation, (the latter of which inspires with Ambition,) joined to some portion of Ideality, account for that high spirit of chivalry, and ardent love of glory, which he manifested in so great a degree,—and these joined to his Combativeness, Destructiveness and Adhesiveness, and the feeling of greatness, arising from the consciousness of his royal descent, sufficiently account for his long and vigorous exertions on behalf of his suffering and much injured country. This combination also, joined to the great power communicated to the mind, by the large size of the brain, would give him a noble and commanding aspect, a princely bearing and carriage, although not a profoundly intellectual look. His Firmness and Hope, which were both large, are sufficiently shewn, by his persevering in his exertions; his patience, under every distress and privation, and his constant expectation of ultimate success, which appeared so remarkable to Boece, that he thinks it can only have "cumin be miracle and grace of God. Howbeit his "friendis war neir all uterly destroyit, he ceissit nevir to "have ferme esperance sum tyme to recover his realme, "and liberte of his pepil."

Owing to his moderate Acquisitiveness, we nowhere find him guilty of any mean or sordid action. It was ever the glory and the power annexed to a crown, and not the possessions attached to it, which he seems to have desired. His moderation in this respect, appears from what we are told by Buchanan, that for some years before his death,

he had given up the splendours of royalty, and lived at Cardross near to Dunbarton, more like a private person than a king. Of his great Veneration he gave many unquestionable proofs, in the regard which he paid to the religion, and even the superstitions of his time; and a very remarkable one appears in the very last act of his life, his ordering his heart to be conveyed to the Holy Land.

I shall now examine more minutely, some of the more prominent passages of BRUCE's History; and I think it will appear that they correspond with the development in a way equally exact and surprising.

The first acts which are recorded of him are unfortunately not such as to afford any omens of his future greatness. In his youth he was wavering and unsettled; and his character unfolded itself afterwards, as events afforded opportunity. After an end had been put to the short and unfortunate reign (if reign it can be called) of JOHN BALLIOL, EDWARD of England (1296), who now hoped to annex the crown of Scotland to his own, held a Parliament at Berwick, and there received the fealty of the clergy and nobles of that country. Among those who concurred in this disgraceful national submission, was "*Robert* "*Bruce the younger, Earl of Carrick.*" The year following (1297), when WALLACE had just begun his great and heroic exertions for the liberation of his country from the English yoke, BRUCE, whose great possessions, as well as his pretensions to the crown, rendered him suspected, was summoned to Carlisle, by the Wardens of the West Marches, for the purpose of renewing his oath of allegiance. "He "obeyed," (says HAILES,) "and *swore on the consecrated* "*host, and on the sword of* BECKET, to be faithful and vi- "gilant in the cause of EDWARD. To prove his sincerity, "he invaded the estate of Sir WILLIAM DOUGLAS, with "fire and sword, and carried off his wife and children.

" He instantly repented of what he had done. I trust, said " he, that the Pope will absolve me from an extorted oath. " He abandoned EDWARD, and joined the Scottish army." —(See HAILES's Annals.)

In all this, we see the deficiency of the conscientious principle, and the dexterity of self-delusion, by which his failure in this respect is reconciled to his religious feelings. Oaths are taken and broken without scruple, trusting to obtaining an absolution from the Pope. But we are not yet done with these acts of tergiversation. Some of the Scottish leaders, and BRUCE among others, afterwards consented to treat with the English; but the known inconstancy of BRUCE required something more than acknowledgments of submission, and oaths of fealty. The Bishop of Glasgow, the Stewart, and ALEXANDER de LINDESAY, became sureties for his loyalty and good behaviour, until he should deliver his daughter Marjory as a hostage. This curious instrument is dated 9th July 1297.

Some time after the successful issue of the battle of Stirling, (but probably not until the spring of 1298,) the young Earl of CARRICK again acceded to the cause of his country, now apparently triumphant. At the time of the disastrous battle of Falkirk, he was in arms on the side of the Scots; but instead of being present in the main army, he guarded the Castle of Ayr, which preserved the communication with Galloway and the West Highlands. This authentic circumstance completely refutes the absurd tale of BRUCE having fought on the side of the English at Falkirk, and of a conference between him and WALLACE, immediately after that battle, on opposite banks of the Carron.

Some time after the unfortunate issue of that engagement, we find BRUCE not merely acting once more with the English party, but, what may seem most extraordinary, we find him apparently high in the confidence and favour of

the English monarch. At this time a Scots Regency was formed in the name of the absent JOHN BALLIOL, who can now be considered nothing else than a mere puppet in the hands of EDWARD. The members of this regency, besides BRUCE, were the Bishop of St Andrew's, and JOHN COMYN, younger of Badenoch. It is understood, that COMYN took the chief direction of affairs under this regency; and that BRUCE was never very cordial or sincere, either in acknowledging BALLIOL, or supporting COMYN, may be presumed, from the feeble and versatile conduct which he always evinced, until circumstances induced or compelled him to urge his own pretensions. (KERR's History of ROBERT the BRUCE).

After this we hear little of BRUCE for some years, during which he appears to have lived at peace, and even in favour with EDWARD, and to have occasionally resided at his court. His large *secretiveness* and *caution*, and also that quick observation and tact given by his large *individuality*, would fit him to play the courtier, and to conceal his real designs under a veil of ease and carelessness. This seems to have continued, until the discovery of the intrigues between him and COMYN, and the slaughter of the COMYN, by BRUCE and his associates, in the church of the Minorites at Dumfries, made it no longer possible for him to preserve terms with EDWARD. I mean not to inquire whether this homicide was justifiable or not. It is only necessary here to examine, whether it is such an act, as BRUCE, from what we know of his development, and consequent temper, was likely to commit upon provocation given. On looking at the development, we perceive *combativeness* and *destructiveness* both large; and in the works on Phrenology, these are uniformly mentioned, as conducing to rage, or that impetuous passion which boils over in a momentary fury; and hence we may confidently say, that,

on the principles of Phrenology, the slaughter of COMYN was such an act, as a person with this development was likely to commit. The circumstances alleged by the Scottish historians, for palliating or justifying the deed, may or may not be true, but the undoubted facts are quite sufficient. It will be remembered, that BRUCE and COMYN were the chiefs of two discordant factions; both had claims to the crown; and at a meeting, for the discussion of mutual injuries between men of such high and irreconcilable pretensions, it is not wonderful that such matter of provocation should occur, as to cause a man of the impetuous temper of BRUCE to have recourse to his sword.

That BRUCE's part in the murder proceeded from sudden impulse, and not from premeditated intention, seems obvious from this, that he did not effectually perpetrate the act. No sooner had he given the blow, than his anger seems to have yielded to his constitutional *cautiousness*; and his *veneration*, which was great, occasioned, if not remorse, a sudden horror at the crime he had been guilty of, the most heinous circumstance of which would probably appear to him to be, that it was committed in a church *. Impressed with these feelings, he rushed out, hardly knowing what he did, exclaiming to his friends without, "I "doubt I have slain the COMYN." They, with more coolness, and instantly seeing the danger of leaving so powerful a rival alive, against whom such an attempt had been made, determined to secure the matter beyond a doubt, and

* "BRUCE," says Sir WALTER SCOTT, "uniformly professed, and probably "felt compunction for having *violated the sanctuary of the Church*, by the "slaughter of COMYN; and, finally, in his last hours, in testimony of his "faith, penitence, and zeal, he requested JAMES, Lord DOUGLAS, to carry "his heart to Jerusalem, to be there deposited in the Holy Sepulchre."
Lord of the Isles. Note 17. Canto II.

going in, stabbed him to the heart. Such a deed, at the present day, strikes us with horror; but in those times it was probably regarded differently. As a proof of this, we may refer to the circumstance of KIRKPATRICK, the chief of those who assisted in the murder, assuming a bloody dagger for his crest, and for the motto, the words "I mak sickar;" plainly alluding to this very deed, which he thus seems to have regarded as redounding to his honour, rather than as being a subject of reproach.

It is probable, from BRUCE's large *cautiousness* and *secretiveness*, that if he had at this time entertained any designs for obtaining the Crown of Scotland, he would have concealed them for some time longer, and delayed taking any active measures till a favourable opportunity occurred, had not this homicide made farther temporising impossible, and rendered an open avowal of his pretensions a measure of prudence, and even of necessity.

Down to this period, we have seen nothing of BRUCE but one continued course of fickleness and tergiversation, giving rise to crimes to which, unless we make large allowances for the difficult circumstances in which he stood, and the feelings of the age in which he lived, we can give no other names than those of perjury and murder. But we are now approaching a different scene, where the powers and propensities with which he was endowed, were all gratified with legitimate indulgence and the fullest exercise, in a manner which redounded not more to his own individual advantage and glory, than to the advantage, the interest, and the glory of his country. From the moment that he touches the last sad point of his degradation, and is driven to the measure of openly claiming the Crown of Scotland, BRUCE appears to rise before as a new man. This is quite easily accounted for by the new direction afforded to his faculties by the circumstances in which he is placed, with-

out any change in his natural character. His former misconduct arose from the opposition which existed between his love of country and his own ambitious views on the one hand, and his fear of offending King EDWARD on the other. But the murder of COMYN having placed him in a state of irreconcilable enmity with the English Monarch, his whole powers are now directed, without any division or distraction, upon one exclusive object, fair and honourable in itself,—the recovering to himself the throne of his ancestors, and to Scotland, freedom from an odious foreign yoke. Besides, the new situation in which he is placed, impressing him more fully with a sense of his own importance, would call into activity feelings which had previously no opportunity of displaying themselves. His *self-esteem*, and *hope*, thus excited, would lead him to consider himself the anointed of Heaven, the destined deliverer of his people. His *love of approbation*, would add to this the desire of glory, and an anxiety to avoid whatever might tarnish the honour of a true knight, and of a lawful Monarch. His *veneration*, joined to all these, would cherish a peculiar sentiment of self-respect, founded upon the long line of a hundred kings, through which the chronicles of his country taught him to believe the sceptre which he now aspired to had been transmitted: And the whole united, would fill his mind with that inborn feeling of dignity, which no degree of merit, without the adjunct of hereditary exalted rank, is ever known to inspire, and make him feel, and be felt by others to be, "every inch a King*."

From this time forth, the life of BRUCE, as related by

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* The following passage, in SCOTT's "Lord of the Isles," descriptive of the mien and demeanour of BRUCE, was pointed out to the author after the above was written. Its coincidence with what is stated in the text, derived from Phrenology, is striking, and affords an instance among a thousand which might be produced, how characters drawn from the life, or with just

our artless chroniclers, resembles the events of an epic poem. It is needless to relate, minutely, the hardships he endured on his first entering upon the arduous task of rescuing his country from the English yoke. We find him, even in these hopeless circumstances, manifesting his veneration for established customs, and the established religion, by going to be crowned at Scone, and sending to Rome for a pardon for the crime of the murder. His first attempts after this were singularly unfortunate. Twice he was defeated by the partizans of EDWARD, and all his followers dispersed. Two of his brothers, who were bringing him reinforcements, were defeated and taken prisoners, and cruelly slain by the English. His wife and daughter were also taken, and remained captives in the hands of his enemies. We find him wandering, deserted, and an outcast in his own kingdom, subsisting on roots, and hiding himself among mountains and in caves, reminding us of the evils endured by DAVID when he fled before the face of the furious SAUL. We need not follow him in the gradual steps, —the fortunate accidents steadily improved, which led to his final success, and the expulsion of the hated Southron from the Scottish soil. The qualities which were here exhibited by BRUCE, both in exertion and suffering, have been al-

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notions and views of human nature, will be found to correspond minutely with those views which Phrenology presents to us.

> " Proud was his tone but calm, his eye
> " Had that compelling dignity,
> " His mien that bearing haught and high,
> " Which common spirits fear;
> " Needed nor word nor signal, mere
> " Nod, wink, and laughter, all were o'er;
> " Upon each other back they bore,
> " And gazed like startled deer."
>
> *Lord of the Isles.* Canto I.

ready, in some measure, pointed out and explained. But it may be proper to contemplate, for a moment, the *means* which he pursued to accomplish his purpose, as illustrative at once of his own character, and of the circumstances in which he was called upon to act. He did not take a profound and comprehensive survey of the situation of his kingdom, measure its strength with the strength of England, combine his means in one great effort; and either by a general rising in every district of the country, or by a collected mass of soldiers, attempt to deliver Scotland from her chains. Such a mode of proceeding would have indicated those higher powers of reflection and combination which his development shews that he did not possess. But he resorted to no such measures. He obeyed the impulses of an instinctive bravery and ambition. He collected a few hundred followers, and took the field with them as at once their King, their commander, and their fellow soldier. A powerful arm was then held in higher estimation than a highly gifted understanding; and while Bruce's prowess in personal combat is the theme of deserved eulogy, no trace is to be found of the display of those penetrating and comprehensive powers which depend exclusively on a great intellectual development.

The following are instances of the kind of exploits performed by Bruce, by which he sometimes extricated himself from difficulties which would probably have overwhelmed any other man. On the occasion of his being defeated, with his small party, by the superior forces of Lorn, in Glendochart, he retreated with his men up a narrow and difficult pass, "he himself bringing up the rear, and re-"peatedly turning and driving back the more venturous "assailants." Three of Lorn's stoutest followers resolved to make a dash at him. "They watched their opportu-"nity (says Sir W. Scott), until Bruce's party had en-

" tered a pass between a lake and a precipice, when the " King, who was the last of the party, had scarce room to " manage his steed. Here his three foes sprung upon him " at once. One seized his bridle, but received a wound " which hewed off his arm. A second grasped BRUCE by " the stirrup and leg, and endeavoured to dismount him ; " but the King putting spurs to his horse, threw him down, " still holding by the stirrup. The third taking advan- " tage of an acclivity, sprung up behind him upon his " horse. BRUCE, however, whose personal strength is uni- " formly mentioned as exceeding that of most men, extri- " cated himself from his grasp, threw him to the ground, " and cleft his skull with his sword. By similar exertions, " he drew the stirrup from his grasp whom he had over- " thrown, and killed him also with his sword, as he lay " among the horse's feet." It is added, that the King's bravery, on this occasion, drew, even from his foes, expressions of the warmest admiration ; and MACNAUGHTON, one of LORN's followers, declared " he had never heard of one, " who, by his knightly feats, had extricated himself from " such dangers as had this day surrounded BRUCE."

A similar exploit is recorded of BRUCE, when in still more desperate circumstances. It occurred in Ayrshire, after the dispersing of his friends, on his first landing in that country. He and a small band who still adhered to him, were pursued by a party who brought with them a sleugh dog, or blood-hound ; which, it is said, " had been " once a favourite of BRUCE himself ; and, therefore, was " not likely to lose the trace." BRUCE divided his force once and again, but still found that his pursuers, guided by the blood-hound, directed all their force in pursuit of the division in which he remained, paying no attention to the others ; at last the King was left with a single attendant, his foster-brother, when five of the most active of his

pursuers were detached to follow him and interrupt his flight. "What aid wilt thou make?" said BRUCE to his adherent, when he saw the five men gain ground upon him. "The best I can," was the answer. "Then," said BRUCE, "here I make my stand." The five pursuers came up fast. The King took three to himself, leaving the other two to his foster-brother. He slew the first who encountered him; but observing his foster-brother hard pressed, he sprung to his assistance and dispatched one of his assailants. Leaving him to deal with the survivor, he returned upon the other two, both of whom he slew before his foster-brother had dispatched his single antagonist. When this hard encounter was over, with a *courtesy* which every where marks BRUCE's character, he thanked his foster-brother for his aid. "It likes you to say so," answered his follower, "but you yourself slew four of the "five." The above story is quoted from BARBOUR, by Sir WALTER SCOTT, in his notes to "The Lord of the "Isles."

I now wish to state, somewhat in detail, the events of the celebrated battle of Bannockburn; events which display more of the spirit of chivalry than almost any of the fictions of romance; and which, so far as BRUCE is concerned, receive no little illustration from the enquiry we are now pursuing. The circumstances which led to this famous action, are well known. BRUCE having made himself master of most of the fortified places in the kingdom, had left his brother EDWARD to besiege Stirling, one of the few strengths still occupied by the English. PHILIP DE MOWBRAY, the Governor, offered to surrender, if he was not relieved on the feast of St John the Baptist (24th June), the following year. To this offer, EDWARD BRUCE, without consulting his brother, agreed.

The King of Scots was highly displeased at this rash

treaty. By it the military operations were interrupted, and a long interval allowed to the English for assembling their utmost force; while, at the same time, the Scots were reduced to the necessity either of raising the siege with dishonour, or hazarding the kingdom on the event of a single battle. But BRUCE was not now the inconstant youth, who had made and broken covenants and oaths, as will or interest directed. He had now to support the dignity of his Crown, and of a name already great in arms. The word of a Prince, of his own brother, had been given to the English knight; and the manners of the age made it impossible to forfeit that word, without an indelible stain upon his honour. He was constrained, therefore, to observe it, through the influence of *love of approbation*, if not from the dictates of *conscientiousness*. He, therefore, consented, however reluctantly, to the treaty, and resolved to meet the English on the appointed day.

BRUCE must, no doubt, have seen with anxiety and alarm, the mighty preparations made by the King of England, for the approaching struggle;—preparations which, as that Monarch imagined, were not only to wipe away all his former disgraces in Scotland, but to finish at one blow the liberties and the hopes of that unfortunate country. And certainly, if victories were to be disposed of by numbers, and if trust was to be put "in chariots and in horses," there seemed then little hope for Scotland, or for her defenders. While England, rich and unexhausted, sent, as we are told, 100,000 warriors to the combat, with such a multitude of followers, as overspread the land, and seemed as if they came to take possession of an easy prey, rather than to fight a dubious battle;—BRUCE, with all his exertions, was unable to raise from his impoverished country, broken with continued oppressions and spoils, more than 30,000 men; and these, as may be supposed, poorly armed and accou-

tred, in comparison with the array of sturdy yeomen, and gaily caparisoned men-at-arms from wealthier England.

We have said, that BRUCE possessed the faculties which impart quickness in perception, and prudence in conduct. The skill and sagacity shewn by him in his choice of the ground where he was to meet the enemy; and his stratagem of digging pits for entangling the English horse, illustrate well those features of his character depending on *individuality*, *cautiousness* and *secretiveness*. It has been remarked, however, that by the disposition he made, he exposed his left flank to the garrison of Stirling. But MOWBRAY, the Governor, had consented to a truce; and if he had assailed the Scotch before the fate of the castle was determined by battle, he would have been deemed a *false knight*. In those days, we are told, the point of honour was the only tie which bound men; for dispensations and absolutions had effaced the reverence of oaths.

The following circumstance deserves to be noticed, as highly characterestic of BRUCE. Eight hundred horsemen, commanded by Sir ROBERT CLIFFORD, were detached from the English army; they made a circuit by the low grounds to the east, and approached the castle. BRUCE, whose vigilance nothing could escape, (his large *individuality* is conspicuous here), rode hastily up to RANDOLPH, his nephew, who commanded the left-wing, and said to him angrily, that "a rose was fallen from his chaplet *; for where he was set to keep the way, he had allowed the enemy to pass."

* This expresion is obscure. If really used by BRUCE, it shews some *comparison* and *ideality*. It may have been a common or proverbial expression at the time. The words of BARBOUR are,

For the King had said him rudely,
That *a rose of his chapilet*
Was fallen; for where he was set
To keep the way, those men were past.

Randolph hastened to repair his fault or perish. As he advanced, the English cavalry wheeled to attack him. Randolph drew up his troops in a circular form, with their spears resting on the ground, and protruded on every side. The enemy far superior in numbers, pressed him hard. Douglas saw him in jeopardy, and asked the King's permission to go and succour him. "You shall not move "from your ground," cried the King. "Randolph must "extricate himself as he best may. I will not alter my or- "der of battle, and lose the advantage of my position." (*Cautiousness*, *firmness*, and the *small* development of *benevolence*, here display themselves). Douglas afterwards obtained his tardy permission to succour his friend; but the aid was unnecessary. Randolph had repulsed the enemy; and Douglas, with a truly chivalrous feeling, forbore to join him, lest he should diminish the honour of his success.

The King's exploit on the evening before the battle, when he clove with his battle-axe the helmeted head of Henry de Bohun, an English knight, who had attacked him as he rode carelessly along his line, is sufficiently indicative of his great personal strength and address (another word for the rapid perception conferred by *individuality*) as well as of his large endowment of *combativeness* and *destructiveness*.

His *veneration* appears conspicuous, in the acts of piety which were performed in the morning of the battle. The Abbot of Inchaffray, we are told, said mass upon a rising ground in sight of the whole army, and afterwards carried barefooted, a crucifix along the line, encouraging the soldiers to fight. The Scots kneeled down. "They yield!" cried Edward, "see they implore mercy." "They do," answered Ingelram de Umfraville, "but not from you! "On that field they will be victorious or die!" De Umfraville was right. When *veneration* is excited in the degree it appears here, along with a powerful *firmness*, and

a sufficient endowment of the combative and destructive powers, there is no thought of yielding or of flight. Men so excited, fear death far less than submission; or, rather, they do not fear it at all. Fighting in a cause which they deem holy as well as just, there is something of the zeal of the martyr superadded to the courage of the hero; and death even appears a consummation to be desired, as at once the most glorious termination of their earthly toils, and as offering an immediate passport to heaven *.

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* The motives which inspire men, and almost render them invincible, fighting in defence of their king and country, have seldom been better pourtrayed than in the nervous lines of BURNS, in the address which he supposes to have been delivered by BRUCE to his soldiers before the battle of Bannockburn. It may not be out of place here, to point out, *phrenologically*, the sentiments and feelings which this address is calculated to call into action.

" Wha wad be a traitor knave? 1
" Wha wad fill a coward's grave? 2
" Wha sae base as be a slave? 3
" Let him turn and flee.

" Wha for SCOTLAND'S KING and LAW, 4
" Freedom's sword can strongly draw,
" Freeman stand, or freeman fa'—?
" Let him on wi' me.

" By oppression's woes and pains, 5
" By our sons in servile chains, 6
" We will drain our dearest veins,
" But they shall be free.

" Lay the proud usurpers low, 7
" Tyrants fall in every foe,
" Liberty's in every blow; 8
" Forward,—do—or die.

These three lines (1, 2, 3.), are all addressed to *love of approbation*, but the first also particularly addresses *conscientiousness*, and the third *self-esteem*.

This stanza, (4,) in addition to the sentiments before mentioned, calls in

It has been said by some, that the English were seized with a panic, on observing what they thought a new army appearing on the heights, which were no other than the waggoners and sumpter boys, dressed out as such with pennons and standards. But by the most authentic accounts, the English appear to have fought bravely; and the victory, though complete, was neither easy nor bloodless. It would rather appear, that the victory was decided by BRUCE's ordering Sir ROBERT KEITH to charge the English archers in flank, while he himself came up with the reserve. Now, BRUCE's development is exactly such, as would enable him to preserve coolness and complete presence of mind, and give distinct orders in the midst of such a scene of carnage and confusion. His large *combativeness* and *destructiveness* are kept in check, and balanced by his *caution* and *firmness*, leaving full scope for that quick observation of passing events, and that intuitive judgment and rapid decision, given by his large *individuality*. In the shock of an engagement, there is no time for subtle and refined combinations. The movements must be simple, obvious and easy; but, above all, they must be prompt and sudden. The intellectual powers which belonged to BRUCE, and which he possesssed in full perfection, were perfectly com-

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the aid of *veneration;* and the following one addresses itself to *cautiousness* (5), and to the domestic affections *philoprogenitiveness* and *adhesiveness*, (6). The last stanza winds up the whole, by combining all the sentiments and feelings already called into action, in rousing to their greatest exertion the powers of *combativeness* and *destructiveness* (7). *Hope* is also excited, by pointing out what is to be the effect of these exertions, (8.) And the last line returns to what may be called the key-note of the ode, and calls the soldier to victory or death. We see here no fewer than ten of the strongest sentiments and propensities called into the most energetic action, and all tending towards one end; and we need not wonder that these should entirely overcome any feeling arising from the single, uncombined, and unassisted effect of any contrary sentiment.

petent to this; and the genius of a SHAKSPEARE or a BACON could not have performed the office so well.

We must not omit to mention the courteous behaviour of BRUCE after the battle, and the generosity shewn by him in his treatment of the prisoners who were allotted to him. He set at liberty RALPH DE MONTHERMER, and Sir MARMADUKE TWENGE, without ransom. (Here we see his *moderate acquisitiveness* makes him regardless of sordid and mercenary considerations). By humane and courteous offices, it is said he alleviated the misfortunes of the captives, won their affections, and shewed the English how they ought to have improved their victories.

That this courtesy and humanity did not proceed entirely from benevolence, appears from the small regard which BRUCE shewed on other occasions for the sufferings of the people, in the destructive inroads which he made into England, when his course was tracked by smoking villages, and every kind of destruction and rapine; and in the ravages of a similar kind, which his brother and he afterwards committed in Ireland. But this was the age of chivalry, and, next to valour, courtesy, and particularly courtesy to the weak and the helpless,—to women and to prisoners, was the virtue most prized in a true knight. The courtesy and kindness here shewn by BRUCE to his captives, proceeded, therefore, most probably, from his *love of approbation*, which we have seen to be great. This is not a solitary instance; it was the fashion of the day. It was exhibited, perhaps, with somewhat more of ostentation and theatrical effect, by the Black Prince and his father, in their behaviour to King JOHN of France, after the battle of Poictiers. Perhaps, also, in so politic a Prince as BRUCE, there might be some regard here to his interest as well as to his glory. Hardly yet secured upon his throne, it might have appeared an object of consequence even to the Scottish Monarch, to ob-

tain the friendship and good will of some of the rich and powerful nobles of England. *Cautiousness* and *secretiveness* may, therefore, have had a share in producing King ROBERT'S kind treatment of his captives *.

The only occasion on which BRUCE'S caution seems to have deserted him, was in his listening so easily to the offer made to his family of the Crown of Ireland. Even here his caution prevailed so far, as to prevent him from accepting that crown for himself; but in permitting his brother EDWARD to accept it, he must have seen, at least he had reason to fear, that he was engaging in an enterprise beyond his means. But his ambition and love of glory had for once overcome his original cautious temper; and these, we may suppose, were excited, in no small degree, by the prosperous state of his affairs at home, and particularly by his wonderful success at Bannockburn; which action, it is said, for a time raised the confidence of the Scots, and dispirited the English to such a degree, that no superiority of numbers would induce the latter to meet the former in battle. The power which is, perhaps, most liable to this kind of excitement from external causes, is *hope*, which we have seen in BRUCE was large: and this will sufficiently account for a step, which, in point of strict prudence, he ought not to have taken.

The behaviour of BRUCE in what has been called his Black Parliament,—his dexterity in first drawing within his grasp,—and his promptness and severity in seizing, condemning and executing so many of his barons, con-

* "There might be policy in this," says Sir WALTER SCOTT, "as BRUCE "would naturally wish to acquire the good opinion of the English barons, who "were at this time at great variance with their king. But it also well ac- "cords with his high chivalrous character."—*Lord of the Isles*, Notes to Canto VI. p. 491.

victed of treasonable practices,—shew in a strong light almost all his characteristic peculiarities,—*cautiousness*, *secretiveness*, *firmness*, *self-esteem*, and *destructiveness*. Had any one of these been wanting, BRUCE could hardly have done what he did upon that occasion. Either he would have failed in taking some of the necessary precautions, or he would have let out his design before he was ready to execute it; or he would have failed, for want of the requisite proof; or he would have faultered in the execution, and extended to some of the offenders (some of them were his own near connections) the royal mercy. But nothing of all this happened. The first who suffered was DAVID ABERNETHY, the King's sister's son. BOECE relates, that "the King wald fain that he had been saifit; "nochtheless he was sa rigorous on the laif, that it might "not be esaly done. And becaus na man labourit for him, "he was heidit, with great lament of pepil: for he was "haldin the flower of chivalry, and had fochtin mony yeris "afore, with great honour and victory, aganis the Turkis. "On the morow, all the remanent conspiratoris war heidit, "in the samen manner, but ony mercy." This is all quite conformable to the character indicated by the development before us; and, indeed, we need only look at this to be assured, that, however he might at times appear the courteous knight, or the kind father of his people, it must have been a fearful thing to have incurred the anger of The BRUCE.

The *secretiveness* of BRUCE is nowhere better displayed than in his sarcastic reply to the messengers of the Pope, when he returned his Holiness's letters unopened, because they were not addressed to him as King,—and when, although he must have been highly displeased at being denied this title, he dissembled his displeasure, and addressed the messengers, as is said, "with a mild and pleasant coun-

tenance." The negociations which afterwards took place to induce his Holiness to yield this punctilio, and to address him by the title of King, are no less indicative of this quality. RANDOLPH, who acted as the ambassador of BRUCE on this occasion, proved himself to be a consummate politician, unless, as is likely, he acted by the directions and according to the instructions given him by BRUCE himself. The mode in which the business was opened, under the pretence of asking leave for RANDOLPH himself to repair to the Holy Land,—the dexterity with which, when this first and principal request of RANDOLPH was refused, other matters were brought forward and discussed touching the reconciliation between England and Scotland,—leaving this, which was really the chief object of his mission, to be brought in at the end, as a matter by the bye, and of no consequence, shews a degree of diplomatic art, or, shall we call it *cunning?* which has rarely been excelled, even in the annals of Papal intrigue. The ambassador of the northern prince proved himself on this occasion an overmatch both for the Reverend Pontiff and the King of England.

BRUCE had been obliged at Bannockburn to risk the fate of himself and his kingdom upon a single battle; but he did so, as we have already said, against his will; and notwithstanding all the glory he obtained on that memorable day, he never would repeat so hazardous an experiment. In his future wars with England, his constant practice was to annoy his enemy by sudden and destructive inroads, and to retreat before a sufficient force could be brought to oppose him. And when the English invaded Scotland in return, he commanded the country to be laid waste, and all the cattle to be driven away before them, so that they could neither find an enemy to fight, nor food to subsist on. On one occasion, we are told, this had been done so effectually,

that, after overrunning all the country south of the Forth, the English could meet with no other spoil than a lame bull, which had been left at Tranent; and, on its being brought to him, the English General asked if that was all they had got; and being told that it was, he declared "he never had seen so dear a beast." Here *cautiousness* seems to be carried even to a degree of excess, and, it must also be confessed, somewhat at the expense of *benevolence*. But BRUCE is not singular in considering it the duty of a monarch, in making war, to take the most effectual means of annoying his enemy, without regarding the sufferings to which he exposes that enemy, or his own unoffending subjects.

Quite akin to this, were the advices which BRUCE is said to have given on his deathbed, for the guidance of his successors. These were three in number: First, Never to make one person Lord of the Isles: Second, Never to engage against England with the whole forces of the kingdom at once: and, thirdly, Never to remain longer at peace with England than three or four years at the most. The reason of the first advice obviously was, that the islands were too great and extensive to be safely put under any one subject, for, if he chose to cast off his allegiance, it might be a hard matter, from their difficulty of access, to reduce him to obedience. For the second, the reason assigned was, that, in case of a defeat, the whole kingdom might not be laid at the mercy of the enemy, but that there might still be some force left to cope with him. And, for the third, that a long peace might make the people indolent and averse to war; and that so the English, whose troops were kept in constant exercise by the perpetual wars with France, might acquire such a superiority in military affairs, as to be able to conquer the kingdom. These di-

rections are remarkable for that plain practical sense which seems to have characterised the understanding of BRUCE, and do not import a degree of thinking beyond what we have seen indicated by his frontal development. They correspond also entirely, and in every point, with his endowment of the propensities and sentiments.

The last act of his life, in directing his heart to be carried to Palestine, there to be deposited in the Holy Sepulchre, is not only accordant with his large *veneration* and *hope*,—the creed of these times inducing a belief that this service, or rather the performance of this vow, would be acceptable to God, and serve as an atonement for the sins of his life; but it would also gratify his *adhesiveness*, to think that this service would be performed by his friend Sir JAMES DOUGLAS, the greatest and most favoured of all his subjects, who had adhered to him through every extremity of good and evil fortune. It would also be highly agreeable to his *self-esteem* and *love of approbation*, as he would consider that such a disposal of the heart of so redoubted a monarch could not fail to add to his glory and renown.

We have now considered most of the remarkable events of BRUCE's life, and have seen that his behaviour in all of them corresponds most remarkably and minutely with his cerebral development. Not only is this the case, but we may even go the length of saying, that were the development in any respect different from what it is, it would *not* have corresponded with the character of BRUCE, as exhibited in his actions. Had the *benevolence* been very large, this, to be sure, might have been consistent with his kindness to his prisoners at Bannockburn; but it would have been contrary to almost every other action of his life;—his want of concern for the lives and sufferings of others, whenever these stood in the way of his interest or his am-

bition; while his courteous behaviour on the occasion alluded to, is sufficiently explained, and by authors not phrenologists, by reference to other feelings. Had *conscientiousness* been large, it would have accounted, no doubt, for his observance of the agreement made with De Moubray regarding Stirling: but how would this be reconciled with his light observance of treaties and oaths upon other occasions? It will also be sufficiently gathered from what has been already observed, that had any of the propensities and sentiments which we have seen to have been predominant in Bruce, been found in a state of less energy than they actually were, his conduct could not have been what it was on many, or almost on any important crisis of his life. Had it not been for his *combativeness* and *destructiveness*, *self-esteem*, *firmness*, *secretiveness*, *cautiousness*, and *love of approbation*, all in large measure, and all co-operating to one end, Bruce could never have succeeded, in what certainly constitutes his greatest glory, the Restoration of the Scottish Monarchy. Had any one of these been wanting, he would probably have failed. His brother Edward was equally brave, but Edward Bruce could not have been the deliverer of his country, from his want of prudence and foresight, (Cautiousness and Secretiveness). Had he been more scrupulous and just, more benevolent and compassionate than he was, he would also probably have failed, or rather, it is more likely, that he would never have made the attempt. It thus appears that Bruce was fitted for accomplishing the great business which was given him to do, not only by the qualities he did possess, but negatively by the very want of others, which he did *not* possess. Bruce, at one time after the battle of Methven, was reduced to perfect desperation. If he had possessed a great reflecting head, and seen the relation of cause and effect clearly, he proba-

bly never would have attempted the liberation of his country. BONAPARTE gave up in far less desperate circumstances. But BRUCE instinctively felt courage that could not be shaken by adversity, ambition that could not be quenched by disappointment, and energy that was fit for every effort; and, acting instinctively under these, without comprehensive views, he succeeded, when, with greater reflection, he would not have made the attempt.

There seem to be, on some occasions, men who are raised up by Providence, as instruments for accomplishing certain great events or revolutions; and just such an instrument BRUCE may be considered to have been.

While, however, I cannot help considering the coincidence between BRUCE's development and the events of his life, as most remarkable and striking, I think it proper to observe, by way of caution (what cannot be too often impressed both on Phrenologists and on the public) that, without a previous knowledge of these events, of the situation which he held, or of the actions he performed, no one, from merely examining the development, could take upon him to say what these actions were, or even what they were likely to be. Dr SPURZHEIM declares, in the commencement of his Physiognomical System, that he cannot speak of *actions*, and this declaration should never be forgotten by those who study Phrenology. No one could tell, on examining this head, whether it was the head of a great and a valiant chief of a rude or semi-barbarous people, or of a common traitor or murderer. We see that the character, as formerly observed, is one of great power, and we know the nature of the power; but it is impossible to predicate whether it is to seek its gratification in a legitimate or illegitimate sphere of action. That depends upon circumstances which cannot be discovered from the development. Thus, one of the sentiments upon which the cha-

racter of BRUCE mainly hinges, is his *love of approbation*. But it is obvious, that the direction which this was to take, and the effect it was to have upon his character and conduct, depended, in a great degree, upon the opinions, the modes of thinking and acting, which prevailed in his day, and the conduct which was then in vogue; or, in other words, which was generally approved. His *conscientiousness*, *comparison*, and *causality*, are not so large as to render him a rule to himself, independently of the character of the age in which he lived. BRUCE happened to be born when the ideas of chivalry prevailed, and when the highest meed of praise was reserved for the fearless valour, the punctilious honour, and the generous courtesy of knighthood; and hence the corresponding effects which this sentiment had upon his behaviour. BRUCE would have possessed a large *self-esteem*, although he had not happened to be born in an exalted station, and the heir of a Crown. But who does not see that this circumstance, though merely external, gives a direction to the propensity which otherwise it never could have received? Had BRUCE been a man of ordinary rank, he might have continued a gay gallant at the court of EDWARD, and sought to distinguish himself, by outshining his compeers at feasts and tournaments, and by courting the favours of the fair; or engaged in the holy wars, and sought renown by fighting with the Infidels in Palestine. Had his birth and station been low, he might have been induced, by discontent, to engage in plots and conspiracies; and had he done so, we might say of him,

> "Here was a man
> "Fit to disturb the peace of all the world."

Like ALCIBIADES, he might have outdone the *Spartans* in abstemiousnes, and the *Persians* in splendour and profusion. In short, it depended in a great degree upon the si-

tuation in which he might be cast, what his conduct should be, and whether his life should be a blessing to his country, or the reverse. Fortunately for him, and for Scotland, it so happened that he was placed, I might say forced, into a situation which called forth all his powers in their most favourable modes of action; and hence his name has come down to us as the greatest and wisest of our Kings, the brave defender of Scotland's liberty, and the great vindicator of Scotland's independence; nor while we continue to enjoy the blessings of freedom, and the administration of equal laws, can we ever cease to remember with veneration and gratitude the name of Robert Bruce.

PLATE 1.

A.N. Henderson Delt July 1870. Engd by C. Thomson Croix Bleue

Miss Clara Fisher

Aged 9 Years.

VII.—*Report upon the Cast of Miss Clara Fisher.*

By Mr George Combe.

(Read 26th December 1820.*)*

In May 1820, Miss Clara Fisher appeared for the second season on the Edinburgh stage. She was then eight years and ten months old. At the request of the Society, a cast of her head was taken by Mr Scoular.

The cerebral development, as shewn by the cast now presented, goes a certain length in throwing light upon two points of considerable importance in Phrenology. The first, Whether great mental power is ever found at an early period of life, in concomitance with a small brain? The other, What particular combination of faculties is essential to success in the histrionic art?

In proof of the possession of great mental power, it may be observed, that Miss Clara Fisher plays *Richard* III. with admirable effect; embodying in her representation much of the intense intellectual energy bestowed by Shakspeare upon that character;—his insatiable ambition,—his

deliberate duplicity, and determined cruelty. She also performs the characters of *Douglas*, *Shylock* and *Falstaff*; especially the first two, with distinguished success. In all her acting, she displays so much comprehensiveness of mind, that, when the full expression of intellectual power and deep feeling is heard from her lips, and her whole manner is perceived to be in unison with that expression, her age and diminutive stature are instantly forgotten, and she is listened to with that fixed attention which genius alone can command. We have only to refer to the periodical publications of the last two years for evidence, that this account of her talents is supported by facts. If it be true, then, that great mental power is never found in concomitance with a small brain even at an early age, that of Miss Fisher must be one of no ordinary size. Accordingly, we find, by comparing the measurement of her head with that of children of a similar age, that it is uncommonly large for her years. The dimensions on the cast, which includes the integuments, are as follows:

	Inches.
From middle of Philoprogenitiveness to Lower Individuality,	7
Do. to Meatus auditorius externus,	4
Meatus auditorius externus, to lower Individuality,	4 6/8
Do. to Firmness,	5 3/8
Do. to Benevolence,	5 3/8
Concentrativeness to Comparison,	7
Destructiveness to Destructiveness,	5 3/8
Secretiveness to Secretiveness,	5 5/8
Cautiousness to Cautiousness,	5 6/8
Ideality to Ideality,	4 6/8
Constructiveness to Constructiveness	4 4/8

The first point being thus ascertained, in as far as one case can bear upon it; in endeavouring to answer the second query, I shall begin by stating the development of each of the organs individually, as indicated by the cast;

and then endeavour to trace the particular combination of faculties, which is essential for the success of an actor.

1. Amativeness,—not fully developed.
2. Philoprogenitiveness,—large.
3. Concentrativeness,—rather large.
4. Adhesiveness,—large.
5. Combativeness,—very large.
6. Destructiveness,—full.
7. Constructiveness,—full.
8. Acquisitiveness,—rather full.
9. Secretiveness,—large,
10. Self-esteem, rather large.
11. —Love of Approbation,—large.
12. Cautiousness, very large.
13. Benevolence,—large.
14. Veneration,—moderate.
15. Hope,—moderate.
16. Ideality,—rather large.
17. Conscientiousness,—full.
18. Firmness,—large.
19. Individuallty, lower,—large.
——————— upper,—full.
20. Form,—full.
21. Size, } moderate.
23. Colouring, }
24. Locality,—full.
25. Order,—moderate.
26. Time,—full.
27. Number,—rather full.
28. Tune,—full.
29. Language,—large.
30. Comparison,—full.
31. Causality,—large.
32. Wit,—full.
33. Imitation,—large.
Wonder,—rather large.

Observations on several individuals in private life, who possessed the talent of acting, led me to conclude, that *secretiveness* and *imitation* are essential requisites to this power; and this inference, it will be observed, is confirmed by the present case; for here both of these organs are large. *Secretiveness* appears to give the power of suppressing and concealing the natural character, and thus aids the mind in assuming, by means of *imitation*, such other characters as are intended to be represented. *Ideality* adds splendour to the performance; for it infuses the spirit of poetry, the glow and colouring of fancy into the personation, and distinguishes it from mere mimickry. *Concentrativeness*, likewise, by enabling an actor to support a variety of faculties in a state of simultaneous and combined activity, aids him in representing mixed emotions, and also in infusing force and expression into the dialogue.

While Secretiveness and Imitation may thus be regarded as general powers, without which no talent for acting can be manifested, it is proper to observe, that the effect with which they can be applied in representing particular characters, will depend on the degree in which other faculties are possessed in combination with them. They confer on the individual only the capacity of applying, in this particular way, the whole other powers of the mind, so far as he possesses them; but they do not supply the want of these powers. For example; an actor destitute of *tune*, however highly he may be endowed with Secretiveness and Imitation, could not imitate CATALANI, or what is the same thing, perform her parts on the stage; and neither could an individual possessing little *combativeness* and *destructiveness*, represent with just effect, the fiery *Coriolanus;* because the natural language of indignation can no more be called up by Secretiveness and Imitation, without Combativeness and Destructivess, than melody without the aid of Tune. Hence, to constitute an accomplished actor, capable of sustaining a variety of parts, a general full endowment of the mental organs is required. Nature rarely bestows all these in an eminent degree on one individual; and, in consequence, each performer has a range of character in which he excels, and out of which he is nothing; and I have found, by repeated observations, that the lines of success and failure bear a decided reference to the organs fully or imperfectly developed in the brain. Any one may easily put this observation to the test of experiment. Actors incapable of sustaining the dignity of a great character, but who excel in low comedy, will be found deficient in *ideality;* while, on the other hand, those who tread the stage with a native dignity of aspect, and seem as if born to command, will be found to possess it largely developed; and also *firmness*, *self-esteem*, and

love of approbation. It does not follow, however, from these principles, that an actor, in his personal conduct, must necessarily resemble most closely those characters which he represents to the best advantage. To enable an individual to succeed eminently in acting *Shylock*, for example, *firmness*, *acquisitiveness* and *destructiveness*, are reckoned indispensable; but it is not necessary, merely because *Shylock* is represented as being deficient in Benevolence, Justice, Veneration, and Love of Approbation, that the actor also should be so. The general powers above referred to, although they do not supply the place of deficient faculties, are quite competent for the time, to suppress the manifestations of opposite sentiments. Hence, in his proper character, he may manifest in the highest degree the moral sentiments; and yet, by shading these for the time, by the aid of secretiveness, and bringing into play only the natural language of the lower propensities, which also we suppose him to possess, he may represent a scoundrel to the life.

In Miss Clara Fisher we perceive all the general powers necessary for acting, supported by a high endowment of a variety of other faculties, calculated to give them eminent effect. In particular, the elementary qualities constituting the character of *Richard*, are present in a high degree; and hence, perhaps, the cause of her representing that personage with peculiar excellence.

The high and full forehead gives her the intellectual energy of that character. The immense *love of approbation*, *firmness* and *cautiousness*, enable her to feel and to express the ambition, the determination, the coolness of the tyrant. The *secretiveness* supplies the cunning, and the *combativeness* and *destructiveness* the fire, and also the genuine obduracy of sentiment so characteristic of *Richard;* while *ideality* throws the colouring of poetry over the whole represen-

tation, averts disgust, and holds the mind subject, by an intense interest, to a being too diabolical otherwise to be looked upon without horror. Of course, the *benevolence*, the *justice*, the *adhesiveness*, and other higher faculties, joined with the great reflective powers, and Ideality, render the real character of Miss FISHER very different from that indicated by her representation of *Richard*.

Although not strictly phrenological, I may, perhaps, be excused, for adding a few additional remarks on her conception of this character. Comparing her representation of *Richard* with KEAN's, I am inclined, in several points, to give her the preference. SHAKSPEARE's has, undoubtedly, invested the character with an intense intellectual energy, and with a deep colouring of ideality. *Richard*, as drawn by the poet, is fell, deceitful, unprincipled, and relentless in the very highest degree; but his passions appear in the shape of motives urging on his intellect, and, at the same time, acting under its guidance, rather than in open bursts of violence and emotion. In short, he is a fiend, but an intellectual fiend. He resembles MILTON's Satan, and not Moloch,

> "The strongest and the fiercest spirit
> "That fought in Heaven, now fiercer by despair."

In SHAKSPEARE's description his youthful days alone are represented as "wild and furious," and his "age confirmed" as "proud, subtle, sly, and bloody*." In KEAN's acting, *Richard* storms, rages, and vociferates. His whole soul is at times

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* SHAKSPEARE's description of *Richard* is as follows:

> "Tetchy and wayward was thy infancy;
> "Thy school-days, frightful, desperate, wild and furious;
> "Thy prime of manhood, daring, bold, and venturous;
> "Thy age confirmed, proud, subtle, sly and bloody,
> "More mild, but yet more harmful, kind in hatred."

lost in outrageous bursts of passion. The ever-presiding intellect is dethroned, and rage and cruelty, and ambition, constitute the man. In Miss FISHER's acting, he is fiery, bloody, and relentless; but his rage, is the storm of a mighty intellect, imbued with hate. In the scene with *Lady Anne*, also, KEAN puts on the air of honesty in such complete perfection, that we feel as if *Richard's* character had changed. He appears no longer to be *Richard*, but a repentant, and an honest man. It is thought by many, that this acting is highly skilful, as it affords an apology for *Lady Anne's* subsequent conduct, and renders it at least in some degree consistent with probability. Miss FISHER, however, as *Richard*, approaches that *Lady* with an air of the most consummate hypocrisy; with a look of contempt for her weakness, yet with a cozening smile that appears deliberately adjusted, so as to impose upon her feeble understanding. The spectator sees the deception,—but it appears as if *Lady Anne* has too shallow an intellect to discover it. In every look, and gesture, and expression, the spectator sees *Richard* as himself;

This description is admirably true to nature, and equally accordant with Phrenological principle. A great endowment of combativeness, destructiveness, secretiveness, love of approbation, and self-esteem, not regulated by conscientiousness and benevolence, would produce such a character as is here represented. In infancy, it would be "tetchy and wayward;" in school-days, "frightful, desperate, wild, and furious;" and in manhood, "daring, bold, and venturous." "In age confirmed," when the intellect had attained its highest degree of controlling power, and when the wildness and fury of combativeness and destructiveness had begun to subside, secretiveness, the fountain of intrigue, would come more fully into play, and then the dispositions would become "more mild, but yet more harmful;" and the individual would be, indeed, "proud, subtle, sly, and bloody." The description, "kind in hatred," is exquisitely characteristic of the manner of destructiveness, when acting under the influence of large secretiveness and love of approbation. It then disguises its villanous purposes, and exhibits an hypocritical semblance of regard, even while it whets the knife for murder.

but *Lady Anne* is so miserably silly, that the disguise is complete enough to impose upon her. This acting throws as much probability into the character as that of KEAN; for it reduces *Lady Anne* to a state of great mental weakness; and it is only on such a supposition that her conduct can be conceived to be at all natural; and it renders *Richard's* character more consistent, and, therefore, more true to nature. From a transient glance of KEAN's development, his *cautiousness* appears greatly less than Miss FISHER's; and, hence, probably, the rage of *Richard* in his acting is open, boisterous and violent; in Miss FISHER's, cool, deliberate, deep and dreadful. In KEAN's acting, you see *Richard* at once; in Miss FISHER's, he appears as an abyss of iniquity, incomprehensible and unfathomable, opening up only by degrees; and the spectator feels it impossible to divine to what extent his evil mind would go, if circumstances but urged him on. The difference of conception of the character, I have no doubt, bears a relation to the different mental endowment of the actors.

Miss FISHER's father and mother accompanied her, and were very polite to the committee who obtained the cast. The father was an auctioneer in Westminster, and his daughter has only lately learned to read; so that she is a child of nature, and not of education. She began to show her histrionic talents at four years of age; and at one year old distinguished airs in music. Her father says, that her verbal memory is so great, that she will learn 100 lines in 100 minutes. She told me that she was fond of play; but her father said that she liked the society of persons older than herself, and could not endure that of children of her own age.

VIII.—*Case of J. G., aged ten years.*

By Mr David Bridges *jun.*

(Read 6th December 1821.)

On 12th June 1821, Captain Davidson, younger of Muirhouse, requested me to introduce him to Mr G. Combe, as he wished to obtain his opinion of a boy whose history was somewhat peculiar and interesting. We waited on that gentleman, and presented the boy, J. G., aged eight years, adding, that he was a singular character, and requested Mr Combe to specify, from his cerebral development, in what respect he was such.

Mr Combe dictated the following note of his development, which I wrote in pencil, viz.

1. Amativeness,—not yet developed.
2. Philoprogenitiveness,—large.
3. Inhabitiveness or Concentrativeness,—rather small.
4. Adhesiveness,—rather full.
5. Combativeness,—full.
6. Destructiveness,—large.
7. Constructiveness,—full.
8. Acquisitiveness,—full.
9. Secretiveness,—very large.
10. Self-esteem,—moderate.
11. Love of Approbation,—moderate.
12. Cautiousness,—very large.
13. Benevolence,—large.
14. Veneration,—rather small.
15. Hope,—moderate or ditto.

16. Ideality,—large.
17. Conscientiousness,—small.
18. Firmness,—mod. or rather small.
19. Individuality,—moderate.
20. Form,—very large.
21. Size,—large.
22. Unascertained.
23. Colouring,—moderate or rather small.
24. Locality,—moderate.
25. Order,—rather small.
26. Time,—full.
27. Number,—moderate.
28. Tune,—full.
29. Language,—full.
30. Comparison,—full.
31. Causality,—very large.
32. Wit,—full.
33. Imitation,—large.
Wonder,—full.

Mr Combe desired the boy to leave the room, and then pointed out, that *form* and *size* were very large, and *constructiveness* considerable; so that he might shew some talent in drawing, clipping of figures, or constructing playthings, in a manner remarkable for his years. The reflecting organs also, he mentioned, were uncommonly full; and suggested it as probable, that the boy would shew uncommon penetration, and considerable scope of mind.

He then adverted to his moral development, and mentioned, that the weakest point was in *conscientiousness*, the organ of which was very deficient. He noticed also, that *secretiveness* was very large; and he put into Captain Davidson's hands the Outlines of Phrenology, from which this gentleman read, that, "when *secretiveness* is full, (and not well directed), it gives "a tendency to duplicity and finesse." He mentioned also, that, from his *acquisitiveness* being full, his honesty might be questionable; and that, from *combativeness* being full and *destructiveness* large, and *love of approbation* moderate, the dispositions would probably be low and grovelling, and the temper hot.

While Mr Combe was examining the development of the head, he remarked to the boy himself, that, from *tune* being well marked, and *time*, *ideality*, and *imitation* large, he ought to be fond of music. The boy denied that he was so; affirmed that he could neither whistle nor sing, and that

he derived no pleasure from hearing either fiddle, flute, or bagpipe played.

Captain DAVIDSON then mentioned, that the boy had been picked up miserable and starving on the highway, by Mrs COCKBURN of Caroline Park; that he pretended he came from Glasgow; but that he was such a complete liar, thief, and swindler, that it was impossible to discover what his true history was; that he preferred sleeping in a dog-kennel, or out-house, skulking like a fox, to sleeping in a comfortable bed in the dwelling-house; that he appeared and disappeared nobody knew how; and even kind treatment did not render him social. Captain DAVIDSON did not know to what extent he had been educated.

At the request of Captain DAVIDSON, Mr COMBE gave him a note of the development, and added to it some remarks regarding the weak points of the character, and the means which the boy's high intellect, *benevolence*, *attachment*, *ideality*, and *cautiousness* afforded for supplying his deficiencies and counteracting his tendencies to evil.

The observations concluded with the remark, that "this "subject is a fair one for education to do its utmost upon. "Nature has given faculties susceptible of education, and "she has left great wants to be supplied. If left to his "natural tendencies, he will probably turn out a very first "rate swindler: if well educated, he may get through life "without crime, and even with credit for his intellectual "powers; but he will, with difficulty, be made amiable, "sincere, and worthy of confidence."

Captain DAVIDSON transmitted Mr COMBE's observations to Mrs COCKBURN, who informed him that she had learned that the boy had run from the Charity Work-House at Glasgow; that she had kept him in her house for a considerable time, and endeavoured to reclaim him by education,

but without success. She added, that so far from being insensible to music, he was *very fond* of whistling and singing; and frequently, when under hiding, he betrayed his lurking place by whistling or singing unawares, so loud as to be overheard.

Mrs Cockburn gave Mr Combe's observations to Mr David Waddell, the tutor in her family, who sent the following letter to Captain Davidson upon the subject.

" Sir, *Caroline Park*, 17*th June* 1821.

" I have read, with regret, the phrenological description of *J. G.'s* head; and it appears to me not more melancholy than true.

" I conducted his education for a considerable time, and had many opportunities of observing his natural propensities and intellectual powers; and I, therefore, feel no hesitation in declaring, that the leading features of his character correspond, in the most striking manner, with the development described in the report. Of his intellectual powers, however, I cannot speak so confidently, as he had little opportunity of displaying them: but the development of his moral faculties coincides in the most decided and unequivocal manner with my observations.

" I recollect one or two instances of his *attachment;* many of his *combativeness* and *destructiveness,* in his disposition to quarrel, and in his cruelty to birds, &c.

" *Covetiveness, secretiveness,* and *cautiousness,* which are represented in the report as very large, were his predominating propensities. These propensities he manifested almost every day, in opening trunks and drawers,—in pilfering every article he could lay his hands upon, and making his bed the receptacle. His schemes were generally devised with a cunning, and executed with a caution, far beyond his years. And, when he happened to be detected in any of his bad practices, to avoid punishment, he always absconded, and frequently eluded the keenest and strictest search. The following incident, which occurred a few nights after his arrival at Caroline Park, exhibits some traits of his character in a very striking light. Having watched an opportunity, when the gardener and all his family were from home, he entered his house; and having barricadoed the door and window, to prevent any interruption in his manœuvres, he regaled himself with the best cheer of the house; and was so liberal in his potations, that, in a short time, a bottle of

strong whisky disappeared before him. He seemed to have conducted matters with great coolness, and with a marked attention to comfort. For, when the gardener obtained admission, he discovered a candle burning on the table, and another ready to be lighted, with the empty bottle, sugar, and other delicacies, and the little urchin stretched upon the bed in a state of intoxication. Another anecdote may be mentioned. He seemed greatly to dislike the idea of being regarded as a menial; and so anxious was he to be distinguished from the servants, that he made it his constant endeavour to sit above them all at church; and being on one occasion compelled to occupy the lowest seat, he wept excessively during the whole service.

"Of his *conscientiousness*, which is described as very small, I do not recollect of having ever seen any indication. I frequently attempted to impress him with a sense of duty, but seldom or never succeeded. I endeavoured, also, to render his *love of praise* subservient to virtue; but this passion being itself moderate, was counteracted by more powerful propensities. I tried, at last, what effect the fear of punishment would have upon him; but this also failed, for he seemed to fear neither God nor man.

"He is certainly, with respect to his moral faculties, the most unpromising subject I ever met with. His dispositions, as alleged in the report, are naturally very bad, and have been allowed to "grow with his growth, and strengthen with his strength." Iniquity, accordingly, seems now to be his element; and so coarse and grovelling are his propensities, so depraved and rivetted are his habits, that, young as he is, I am afraid it would baffle even the *regenerating* plan of Mr Owen to reform him.

"I trust you will excuse these loose and unconnected observations. I am, &c.

"David Waddell."

Mrs Cockburn, finding the most anxious efforts to amend his dispositions unavailing, and having ascertained that he had run from the Charity Work-House at Glasgow, returned him to that establishment, but before Captain Davidson was aware of her intention to do so, so that a cast of his head was not obtained. Mr Combe sent a copy of the development,—of his own observations, and of Mr Waddell's letter, to Dr Chalmers, soliciting his attention to the boy; and afterwards received the following letter from Dr Chalmers.

" Dear Sir, *Glasgow, December* 13. 1821.

I feel heartily ashamed of my long delay in answering your most kind and interesting communication. The truth is, that I consigned the affair over immediately to one, who undertook to look after the case, and failed. My brother-in-law, who is now with me, came in his place; and I trust that matters in regard to the boy of whom you wrote are in a right train. He has made characteristic exhibitions of himself since he came to the Town-Hospital of Glasgow, having repeatedly made his escape from the place, and conducted himself in a way that shows him to be at once dexterous, deceitful, and impatient of the restraints of ordinary life.

" There is a friend of mine, who has adventured to take him out of the Hospital, and give him employment in a callender. He will be looked sharply after, and I can confide in all being done to his moral and religious training through means of Mr Buchanan, who has kindly taken this experiment in hand. I expect to see the boy soon; and indeed would have done something hitherto in my own person, had it not been for a weight of engagements which are always upon me.

" Mr Pratt desires his best compliments; and I entreating, that I may be forgiven my past negligence, farther request you to believe me,

" Dear Sir,

" Yours truly,

(Signed) " Thomas Chalmers."

Continuation of the Case of the boy J. G.

By Mr George Combe.

(Read 9th January 1823.)

Since this case was last under consideration of the Society, I have learned that the father of the boy was a writer of dissipated habits and indigent circumstances; but of considerable talents. His mother, whose character was not favourable, died when he was five years of age, in consequence of which circumstance he was taken into the Charity Work-House of Glasgow.

In conformity to a general practice, he was boarded out of the Hospital, and the woman to whose care he was committed, as subsequently discovered, was not quite correct in her conduct. He remained with her for two years. At the age of seven, he was taken back to the Work-House; where he shewed a disposition to idleness and tricks. Whenever an opportunity offered, he ran off to his nurse. Every effort was used by the Manager of the Work-House to check and amend his dispositions, but without success.

After writing the letter of 13th December 1821, Dr Chalmers took the boy out of the Charity Work-House, and gave him in charge to Mr Buchanan, one of his Elders. By close watching and constant employment, he conducted himself so well, that Mr Buchanan mentioned only one instance in which he had been implicated in misconduct, and as several other boys were also engaged in it, the real amount of blame attachable to him was not easily ascertained. He, however, was not very favourably situated in Mr Buchanan's service for moral and intellectual education, farther than being kept in unremitting employment in the callender, and receiving an occasional lesson from one of the workmen, with whom he lodged. In August 1822, Dr Abell, on a visit to Glasgow, saw him, and suggested that he ought to be brought to Edinburgh, where he would be more completely attended to. I communicated this suggestion to Dr Chalmers, and he having given his consent, application was made to Mr James Milne, brassfounder in Edinburgh, who kindly undertook to receive him, and to instruct him in his trade. In October 1822, I waited on Mr Buchanan in Glasgow, received the boy, and brought him to Edinburgh, and he is now (January 1823) boarded with Mr Andrew Reston, a person in the employment of Mr Milne. Being only about twelve years of age, and not forward in his growth,

he is still too young and weakly for Mr MILNE's employment; and, in the mean time, has been sent to a public school in Leith Wynd, at which it is intended to keep him engaged for two or three years, that he may learn reading, writing, and arithmetic; after which he may commence an apprenticeship with Mr MILNE. A cast of his head has been obtained, and is now presented, (Busts, No. 25.)

The great peculiarities of his natural dispositions are an excessive *secretiveness*, with a deficient *conscientiousness* and *firmness*. This combination produces in him a strong tendency towards duplicity and cunning, with a great insensibility to truth. He has behaved with propriety since he came into Mr RESTON's hands, although he has not failed to manifest his *secretiveness* on more occasions than one. One instance is so remarkable, that it is worthy of being noticed, and I shall use Mr RESTON's own words:

"He had never refused to attend school, but had given several indications that it was rather an irksome task to him. I told him one day to bring home his book, that I might hear how he was getting on, and that I would assist him in getting his lessons. He stated on return, that the master would not allow any of the scholars to take their books out of school. I then wrote a note, and gave it to him to be delivered to the teacher, requesting him to send me a duplicate of his book, for the purpose mentioned. J. forgot to deliver the note; next day he said he had got no answer: and when he saw that I was getting impatient, he said that the master would not allow any person but himself to give lessons to his scholars. Not being satisfied, I waited on the teacher, who informed me that this was the first time he had heard a word on the subject, and willingly gave me what I wanted. On Sunday following, after breakfast, I gave the book to the boy, and asked him to look out the lesson he was then learning, and read it. He searched the book from beginning to end repeatedly, and could not find the place, and then in the most artful manner endeavoured to make me believe it was a wrong book. Having had some little conversation with the teacher respecting him, and which took place alongside the class to which he belonged, I had a distant recollection of the lesson myself, and pointed it out to him, and requested him to proceed. I laboured upwards of half an

hour, and could scarcely get him to name a single word. I then took him aside, and remarked to him rather firmly, that I believed his intentions were to deceive me; that I clearly perceived his designs, and that if he meant to persist in such practices, I would assuredly proceed to the most severe corporal punishment. Nothing more was said till towards evening, when I ordered my own boy to read over a lesson, and J. to do so at same time (without making any observation on what had taken place in the forenoon). J. looked out the lesson, and then was able to read it, and some others, with the exception of only a very few words."

Acquisitiveness is full in the boy's head, but not preponderatingly large. There are several instances in which great cunning, and moderate acquisitiveness, when not regulated by conscientiousness, have produced theft.—While with Mrs Cockburn, he was accused of several petty depredations, but no instance of this kind, with the exception above mentioned, occurred while he was with Mr Buchanan; and since he came to reside with Mr Reston, only one very trifling manifestation of the tendency has been observed. He lately abstracted some buttons, for which he had taken a fancy, from one of Mr Reston's children, and stoutly denied his possessing them, although they were immediately taken out of his pocket. He shews a tendency to acquire objects frequently of no value, and Mr Reston mentions, that his pockets are sometimes stuffed with mere trumpery, which even ordinary children of his age would not reckon worth the possessing.

To counterbalance these unfortunate tendencies, the organ of *cautiousness* is very largely developed, and while this aids cunning, by prompting him to be more prudent in his schemes for deceit, it likewise renders him more alive to the emotion of fear, and, of course, furnishes a source of motives to avoid misconduct, through terror of the consequences which may follow in the way of punishment. As his faults arise from an abuse of natural tendencies, Mr Reston makes a point of treating him with

uniform gentleness, mixed, at the same time, with sufficient firmness and decision. It is intended to make the boy acquainted with his own nature as early as possible; to make him aware that his chief enemies lie within himself, and to make him feel from experience, that there are good men in society, whose countenance it is his interest to maintain, by conduct croresponding to the laws of morality. In his head, the organs of *adhesiveness*, *benevolence*, and *ideality*, are largely developed, while *love of approbation* is moderate in size. These faculties will afford very considerable means of elevating his conduct, and, if sedulously cultivated, of counteracting his inferior propensities. His *knowing* and *reflecting* organs are decidedly large, and, so far as has yet been observed, his talents correspond. He will not, therefore, be deficient in ability, however much he may be so in principle. Firmness is rather deficient; and while this will render him more easily managed and led to virtue, it will dispose him, at the same time, the more readily to yield to temptation, when placed in his way. In short, we have, in this individual, a combination of great deficiencies with great endowments, and as, from the outset of his life, he appeared to be running, by rapid strides, to perdition, it is impossible to render him worse, while there are many chances of rendering him better, by a good education, and sedulous moral and religious training. The trade of a brass-founder affords considerable scope for invention, taste, and ingenuity, and it is selected as one which, viewing the combination of his organs, will probably interest his mind, and this would be a great step gained in leading him to virtue. Mr Reston is assistant Librarian in the School of Arts, and gives constant attendance at the lectures. He means to carry the boy to that institution, as soon as his mind shall be capable of profiting by scientific information; and in this way also his intellect may be

called into action, and a relish excited in him for pleasures which can be enjoyed only by the preservation of a spotless character. In short, it must be by elevating and enlarging the general tone and scope of his sentiments and intellect, and by making him feel a substantial interest in virtue, on account of the pleasures it affords, and the advantages it confers, rather than by a multiplicity of rules and precepts committed only to the memory, that success ought to be expected. Even after every exertion shall have been used, the result may not correspond with our expectations; for those who have looked most closely into the web of human life, are aware how difficult it is to change the threads of Nature's weaving; and that the poet's observation,

"Naturam expellas furca, tamen usque recurret,"

is too well supported by experience to admit of being slightly regarded. Whatever measure of success, however, shall ultimately attend the experiment, good must ensue. If it fail, this will serve as one instance to shew, that the wicked are sometimes unfortunate as well as criminal, and that no ordinary circumstances are sufficient to correct dispositions radically and naturally bad; in short, that the leopard cannot change its spots, nor the Ethiopian his skin. If this fact were demonstrated to be generally true, the Legislature would perceive the propriety of endeavouring to prevent crimes, rather than of trusting exclusively to punishment as a corrective,—a practice which is founded entirely on the principle of the criminal being capable, if disposed, in all cases completely to restrain his improper desires.

If, on the other hand, we shall be so fortunate, which I sincerely trust will be the case, as to rescue this boy from the dominion of his lower faculties, and elevate him into a moral and intellectual being, it will be a glorious instance of the

triumph of education over great natural defects, and it may furnish an example ultimately productive of the most beneficial results.

Issue of the Case of J. G.

The following communication, which was laid before the Society on 24th February 1823, will shew the issue of the experiment detailed in the preceding communication.

Letter Mr Andrew Reston to Mr George Combe.

" Sir, *Edinburgh, 24th February* 1823.

" When you requested me to take the boy J. G. under my charge, (where he remained for near five months,) it was your wish that I should note such observations of facts regarding him, as I might consider of consequence in delineating his true character, and give you a narration of them. Before doing so, you must allow me to remark, that this singular boy would have required a discriminating acquaintance with human nature, in all its bearings, together with a closeness and accuracy of observation, to which I have not a shadow of pretension; and I may candidly state, that I need not attempt, by language, to convey to the mind of any one those impressions which his conduct, as a whole, has left on my own.

" For some time his behaviour afforded very little for observation. Indeed, so much so, that I had become very sceptical respecting the greater part of the statements that had been given me respecting him. His general demeanour was quite compliant, rather artless than otherwise, and inoffensive. The only observations that I can offer, from the very commencement, were, that he seemed to have an indirect eye and ear upon all that was passing around him, so that you could not, at any time, direct your eye toward him, that his did not instantly catch yours; not by a similar direct look, but by a momentary side glance, which he would keep up so long as your attention might be directed to him *. This was observable, whatever he might be engaged in at the time. I may remark, too,

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* This is the natural expression of a large *secretiveness*.

his disinclination to voluntary communication, except it were elicited from him by questions. I do not recollect of ever hearing him give a voluntary statement of any past transaction, either trifling or important. Another rather remarkable circumstance occurred soon after he came to us. It appeared that he had never been accustomed to sleep with a night-cap; and his hair was, in consequence, all dishevelled, and standing on end. When one was got for him, he seemed much disinclined to use it; and for two or three nights threw it aside, after he went to bed. When questioned about it, he said it always came off when asleep; and that he could not help it. I ordered strings to be put to it, and they were tied by one of the family. On the second morning afterwards, the cap had disappeared, and the boy could give no account of it whatever. My wife had noticed him putting something below his bed that morning, and had the curiosity to make a search, when she found the cap thrust into the most obscure place, betwixt the bottom of the bed and matress. J. insisted that it must have been some other person who put it there, as he did not do so. For this I took him strictly to task (by remonstrances and threats,) and his conduct became more studiously concealed for some time.

"I have mentioned that he never made a voluntary communication on any subject or case. The following is a remarkable instance. Being one day requested to go a message to a relation of ours in Pleasance, on his return, he had fallen on the street, and a cart passing at the instant, the wheel went over his legs. One of the crowd, who had gathered round, carried him to the most convenient place, which happened to be the very house that he had left but a few minutes before.—His legs were examined, and every thing done for him that his case required. As the cart was empty, and there was loose snow on the street, he was so little hurt as to be able, in a little time, to walk home. I happened to be in the way when he returned, and noticed him halting a good deal, and enquired what was the matter? He replied, That he had fallen on the street, and that having come down in a certain position, (putting himself into an attitude, to shew me) he had hurt one of his legs a little. On examining the leg, it appeared a good deal swelled and discoloured; and all the bandages and dressing, which it had previously received, had been removed on his way home. I observed, also, that his cheek, and one of his eyes, were injured. He said, that one boy had been throwing a stone at another, and that it had struck him by chance. Next day, our relation sent one of her family to inquire how J. was after the accident; but this person not knowing what had happened to him, could not give us any particulars; and it was not till a

week after that our friend called herself, and gave us all the information about the matter, not one syllable of which had escaped from the boy. Another instance of absurd concealment may be noticed. A pair of new stockings which had been given him on a Sunday, had disappeared; and he could not give any account of them, except that he had laid them aside with his Sunday's clothes. On examining his legs at the time of the accident, I found them inside of his common stockings; that is, he was wearing two pairs at same time: and yet he deliberately affirmed, that he did not know any thing about this circumstance, alleging, that some other person must have put them on unknown to him.

I do not recollect, in my whole life, being as completely baffled as I was by the boy, in the following case. One Sunday he and I only were going to church. After being dressed, something occurred which detained me for a little; and I told J. to proceed to church, and I would follow him instantly. It happened that I did not get away for about ten minutes, and was surprised enough that I did not find him in the seat. He returned to the house punctually about the usual time of dismissal. Seeing that he returned alone, my wife asked him, when he came in, where I was? He replied, that I was just behind him, and would be here immediately, which was literally the case. I did not tell him that I had been at church, but put a few general questions to him, to learn his movements; to all of which he gave ready answers; yet, in so vague and artful a manner, as almost to convince me that he had not been there. I then took him aside, and put a long series of questions to him, the answers to which were managed with such dexterity, as almost to deserve compliment for his deceptive ingenuity. Whenever he discovered that I had been there, he immediately pretended to recollect that he had gone up the left hand staircase, in place of the right, and of course had been in another seat by mistake. Some of the questions were as follows: Q. What part of the seat were you in? A. Near the head of it. Q. Was it throng? A. Middling. Q. How many might there be in it? A. I do not know; I did not count them. Q. Were there any females in it? A. Yes; some. Q. How many do you think? A. The place where I was sitting I could not see very well. Q. You have said there were some? Were there more than one? A. I am not sure if there were more nor one. I put a number of similar questions respecting the seat before ours, but J., conceiving that he had now got the fact of his being in a wrong seat established, gave me more specific answers, without it being in my power to check him. Q. Did the congregation dismiss when you came out?

A. Yes. Q. It is the Sacrament Sunday this, and they are not dismissed yet? A. A number came out when I came away, and I thought they had been all coming. Q. What was going on when you came out? A. Singing psalms. The two last answers being strictly correct, I was again uncertain whether he had been at church or not, and said little more about the matter at that time, resolving to resort to another method, by which we had repeatedly got at the truth. That was to tell him, that we had obtained information from some other quarter, of his having been seen doing this, or going such a where (as the case might be). Whenever he apprehended that our statement was going to be worse than the truth, then, and then only, would he make a correct acknowledgment. Accordingly, on the day following, we obtained the confession; that I being detained a little longer in the morning than either he or I expected, he supposed that I was not coming to church, and therefore made off for Leith, and spent the forenoon there. He called at church on his way home, (being in St James's Place,) and was thus enabled to answer the two last questions correctly. By the same method, we obtained the acknowledgment that he had spent two other Sundays in a similar way, when sent to church by himself, but returned exactly at the mid-day and evening dismissals.

"In comparing some parts of his conduct with others, I was frequently at a loss what opinion to form regarding him. For instance, if sent the most trifling message, he generally (I should rather say uniformly) indicated the greatest dulness, amounting sometimes to actual stupidity. We soon discovered that he had no great partiality to going errands; and as they occurred more frequently than he seemed to relish, he resorted to that method of getting quit of them. When sent about any thing relating to himself, in which he was interested or pleased, his manner of going about it was a complete contrast to that assumed on these other occasions. Before he left us, he had in part succeeded in his design; for the members of my family would rather have performed a number of the messages themselves, than been bothered with his blunders and assumed stupidity. I have seen him, when sent out for a single article, return two or three times to ask what it was, and buy something completely different after all.

"I could detail more facts, corroborative of what I have here mentioned, but prefer stating a few circumstances minutely, to relating many in general terms.

"I have now to advert to the most melancholy trait in his character, that of pilfering. In a very short time after he came to us, various little things disappeared. The first instance that

we noticed was this: One day I had put a small leathern bag, containing some silver, upon a table in the parlour, (having occasion to go out in haste); when my wife looked in, a little after, J. had unloosed it, and had his hand fairly introduced into it. He excused himself, by saying, that one of my children was anxious to see what was in the inside; and that he was only going to indulge her. In two different instances, we discovered that he had carried off articles, and disposed of them among his school-fellows. When ordered to bring them back, he told us that the boys had left the school, and that he never afterwards saw them. One evening, our little infant, in my sister's arms, dropped a penny; and it being inconvenient for her to stoop at the moment, she clapped her foot on it, and called to J. to hand it to her. He pretended to make a long and diligent search, but could not find it. My sister being confident that he must have got it, accused him accordingly; upon which he turned out all his pockets, and persisted, with his usual confidence, in denying that he knew any thing about it. Next day, we got him to acknowledge that he had really found it, and had concealed it in the sleeve of his jacket, till he got out of the house, when he disposed of it.

"The following circumstance shews another method of imposition that he attempted. I was informed, that one evening, when he was sent out a message, he pretended to have lost a shilling on the street, gathered a great crowd around him, and set up a most piteous outcry about his loss, assuring the passengers, that if he did not obtain a shilling somehow or other, he need not go home. However, he could make nothing of it, and contrived to find the shilling himself, and came home as usual. We heard nothing of the matter from him, but from another person, who had witnessed it. These, and several others, are specific cases of pilfering which I could bring home to him, but I have no hesitation in imputing to him a good many more, which he had managed in such a way as to escape detection at the instant. He was in the frequent practice of getting out of bed during night, procuring a light, and rumaging the whole house. Two different times, I am certain of a small sum of money having been taken from my pockets; also two pen-knives, one of which I regretted particularly. I cannot say that his disposition to pilfer was confined to any particular object. It seemed quite indiscriminate. I have noticed sometimes, his pockets a little bulky when he had returned from school, and have examined them two or three times, when I generally found them stuffed with such things as he must have obtained from dunghills, or similar places: and the articles were of such a nature, and in such a state of dirt, that I would have imagined the most co-

vetous disposition could not have been gratified with them. He never withheld an answer when a question was put to him: and we sometimes put a few relating to himself; the answers to which, and the manner in which he gave them, made me often doubt if his conceptions of right and wrong were not considerably deficient. For example, he was asked one night how long it was since he had commenced telling lies? He answered, with the greatest ease and pleasantry, that he had told lies ever since he recollected; and that he did not think there was any harm in it. On another evening, when he had been getting a severe reprimand for falsehood, my sister offered him some small reward, if he would abstain from telling lies for one week only. In a little, he replied, very coolly and good humouredly, that he might try, but he was sure he could not do it; for he had never passed one week of his life without telling lies.

"For the last two or three days that he was with us, he had behaved very correctly; and we were almost in hope that something might be made of him. On the day preceding his elopment, he signified much anxiety to have his shoes repaired; and this I gave him permission to get done. On the evening he was very anxious to have his Sunday's clothes laid out, that he might put them on in the morning, which, for some reason, were refused him. He seemed very uneasy all next morning, and inquiring whether he was to get to church. Upon being told that he was, he dressed himself with great dispatch. As soon as I was dressed, I said he might be going; when he instantly left the house, and has not since been heard of. It appeared that he had been out of bed the preceding night, and had extracted 1s. 6d. from my pocket. We did not discover any thing else missing, except a little bread, for which we did not blame him.

"I might have extended further details of him, but as they are all of similar import, I presume what I have given will afford a tolerable specimen of this most remarkable youth. I am, Sir, your humble, and most obliged servant,

"A. Reston."

Notice of the boy's elopement was instantly given to the Manager of the Charity Work-House in Glasgow, and to every person with whom he was known to be acquainted; but up to the present day no account of him has been received. A report of a boy of the same name and age having been found swindling in Berwickshire, reached a member of the committee in July; but on farther inquiry, he ascertained that the individual was another than the subject of the present communication.

20th August 1823.

IX.—*On inferring Natural Dispositions and Talents from Development of Brain.*

By Mr George Combe.

(Read 11th April 1822).

In several instances, casts of the heads of individuals, or a note of their cerebral development, have been sent to phrenologists, who have given sketches of the natural talents and dispositions of the originals, sometimes with great accuracy and truth, and sometimes with more equivocal success. None of the practical applications of the science has been regarded with greater suspicion or dislike than this; and it has been, unhesitatingly, represented as mere quackery, or at least as entirely akin to fortune-telling and palmistry in general. A short inquiry into the principles on which the practice is founded, may, therefore, not be without utility.

The proposition, That the natural energy of each primitive propensity, sentiment, and intellectual faculty of the mind, bears a relation to the size of a particular portion of

the brain, is one that can be proved to be true or false only by observation. Every phrenologist holds it to be certainly true, and, accordingly, it will be treated as a fundamental principle in the present discussion. A healthy brain, at a vigorous period of life, is always understood.

If, then, a head is presented to us, in which the organs of intellect and of the moral sentiments are largely developed, and those of the animal propensities very moderate in size, it is quite obvious, that, if the mental powers act with a force corresponding to the dimensions of the organs, the tendencies of the mind will be strongest towards moral and intellectual pursuits, and that they will be comparatively feeble in the range of animal desire. To predicate that this will be the case, savours no more of divination, (the *principle* being admitted), than it would do to predict, that the scale of a balance which is charged with the heaviest weight will descend. It is quite true, that if the principle is regarded as *unsound*, all conclusions deduced from it must appear empirical; and the coincidences, when such occur, betwixt the inferred tendencies and the actual dispositions, can be looked upon only as fortuitous,—or lucky hits, exactly resembling those occasionally made by fortune-tellers, to whom phrenologists have been compared. But, in this case, the empiricism of the conclusions is *apparent* only, and not real; and the semblance of it arises altogether from *disbelief*, in the observer, in the soundness of the principles on which the phrenologist proceeds, and not from any perception of inconsequence betwixt the principle and the result. The charge, therefore, is itself empirical and unphilosophical, unless the objector be prepared to establish, by evidence, that the principle is really unfounded in nature, or to meet the proofs of its reality offered by the supporters of the system, which is generally

the farthest thing in the world from the intention of the opponent.

It will be said, however, that the actual dispositions and talents of individuals, are the result, not of their natural mental constitution merely, but of this modified in a thousand ways, by education and external circumstances; and that, as the influence of the latter causes is not indicated by the cerebral development, the conclusions of the phrenologist are still liable to the charge of being deduced without attention to all the elements by which the character is formed. The answer to this remark is simple. The phrenologist in no case ventures to predicate, from the mere development, any thing more than simple natural talents and dispositions; and in every instance where a sketch, resembling that of actual character, has been given, previous information has been afforded of the age, sphere of life, and education of the individual in question; and the conclusions have consisted of an estimate of the effects of these extrinsic causes operating upon, and modifying, the direction of the original powers. Hence, there is principle in this case, as well as in the former; and, however difficult its application may be, or however incapable the phrenologist may be supposed to be to apply it with success, the very circumstance of principle being recognised, and of its being adequate, if ably employed, to produce the result, ought to absolve the science and its followers from the idle imputation already alluded to.

There are cases in which the natural dispositions and talents are so decided, as to command and predominate over external circumstances, instead of being greatly modified by them. Shakspeare and Burns, and Buonaparte, for example, forced upon the world the impression of their natural powers, in opposition to the strongest external obstacles to their success. Now, if the principle above stated

be correct, the brains of these individuals must have presented phrenological indications of their predominant powers as well marked and unequivocal as their mental manifestations themselves; and, if so, it is quite obvious that a phrenologist, on examining their heads, might have predicated quite philosophically, that SHAKSPEARE possessed immense energy, an unbounded scope of fancy, and a very great talent for observation; that BURNS was gifted with much manly, yet tender and simple feeling; and that BUONAPARTE had received at birth an endowment of prodigious energy, joined with insatiable ambition and great intellectual power. In short, in this instance also, the question resolves itself again into this: Does the natural energy of the mental powers bear a relation to the size of their organs or not? For if it does, then it is quite philosophical to predicate powerful manifestations from large organs.

In cases where the organs of the animal propensities, moral sentiments, and intellectual powers, exist nearly in equilibrio, education and circumstances produce the greatest effects; because then, individual powers may have been cultivated into a comparatively high degree of activity, while others may have been left comparatively dormant; and thus the actual result may have depended more on adventitious than natural causes. In all such cases, the phrenologist would limit himself, by pointing out this very capability of being greatly modified by circumstances, as the distinguishing feature of the character; and he would not venture on inferring a single particular trait, unless he were minutely informed concerning the nature of the modifying causes.

On the other hand, when particular organs are greatly defective, the modifying influence of circumstances is small, for unless a certain degree of power be conferred by nature, education has no basis to act upon, and will produce very

limited effects. Hence, if a skull be presented to a phrenologist, in which the organs of the intellectual faculties, and of the moral sentiments, are greatly deficient, and those of the animal propensities greatly developed, as in Mary Mackinnes, the inference is unavoidable, that the strong tendencies are all to low gratification, and that as the restraining powers are feeble, the dispositions of the individual, unless controuled by power superior to his own, will correspond.

Case in which the Natural Talents and Dispositions of the Reverend Mr M. were inferred from the Development of his Brain. Communicated by Mr BRIAN DONKIN.

IN March 1821, I transmitted to Mr GEORGE COMBE, in Edinburgh, a cast of the head of a gentleman, Plate II., fig. 2., stating that the individual in question had received a good education, and moved in enlightened society, but without mentioning the name, or any circumstances of his life or profession; and I requested that he would give a sketch of the natural talents and dispositions which the development appeared to indicate. In a letter dated 31st March in that year, he sent me the following remarks.

" The cerebral development of the gentleman whose cast " you sent, appears to have been as follows *.

* The Committee beg to remark, that, at the time this development was stated, the Society had not fixed on specific terms to be used in denoting the relative size of the organs; so that some expressions occur here, which

" 1. Amativeness,—rather small.
" 2. Philoprogenitiveness,—large.
" 3. Inhabitiveness, now Concentra-
" tiveness,—moderate.
" 4. Adhesiveness,—moderate.
" 5. Combativeness,—small.
" 6. Destructiveness.—pretty full.
" 7. Constructiveness,—moderate.
" 8. Acquisitiveness,—rather full.
" 9. Secretiveness,—rather full.
" 10. Self-esteem,—large.
" 11. Love of Approbation,—very large.
" 12. Cautiousness,—very large.
" 13. Benevolence,—large.
14. Veneration,—very large.
15. Hope,—large.
16. Ideality,—not large.
17. Conscientiousness,—very large.
18. Firmness,—large.
19. Individuality,—small.
20. Form,—moderate.
24. Locality,—large.
28. Tune,—rather full.
30. Comparison,— full.
31. Causality,—full.
32. Wit,—moderate.
33. Imitation,—full.
Wonder,—not large.

" The individual would be *decidedly moral and intel-*
" *lectual, and little prone to animal indulgence.* He would

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are not now generally used. Their meaning, however, is so obvious, that no change or explanation appears necessary. They increase in the order " small, moderate, large." The practice of measurement also, was not then resorted to ; but they subjoin the dimensions taken from the cast in possession of the Society, Bust 26., the integuments being included. The only correction which the measurement suggests on the development, as above noted, is to state Destructiveness " Large," and Cautiousness " Ra-
" ther Large," in place of " Pretty Full," and " Very Large," shades of difference which do not affect any of the points in the sketch.

From junction of occipital spine with Philoprogeni-	Inches.
tiveness to Lower Individuality, . .	$8\frac{2}{8}$
Concentrativeness to Comparison, . .	$7\frac{6}{8}$
Meatus auditorius externus to occipital spine, .	$4\frac{3}{8}$
Ditto to Lower Individuality, . .	$5\frac{7}{8}$
Ditto to Benevolence, . . .	$6\frac{5}{8}$
Ditto to Firmness, . . .	$6\frac{5}{8}$
Destructiveness to Destructiveness, . .	$6\frac{4}{8}$
Secretiveness to Secretiveness, . .	$6\frac{3}{8}$
Cautiousness to Cautiousness, . .	$6\frac{6}{8}$
Ideality to Ideality, . . .	$5\frac{1}{8}$
Constructiveness to Constructiveness, .	5

" be scrupulous and *honourable* in the extreme, *with a great* " *aversion to debt*; *ambitious of distinction*, or desirous to " please, but exceedingly modest, and *most esteemed by those* " *who knew him best. His justice, though great, would* " *not be severe, but would be softened by benevolence, and* " *elevated by veneration.* The intellect would be pene- " trating, but would *have a greater tendency to speculate* " *on moral than on physical causes.* He would shine " more in the private circle than in public. His under- " standing would be slow, but sound in its conclusions; " and he would be much troubled with doubts and diffi- " culties in his decisions. The individual would not wor- " ship wealth, but *he would have a prudent regard for pro-* " *perty, and would calculate his expences and his income,* " *so as to keep the former considerably within the latter.* " He would be alive to music. He would be religious, *and* " *a sincere worshipper of* God."

Mr Combe's letter was shewn to the surgeon, from whom I obtained an account of the case, and who attended the patient during his illness: had known him for many years, and opened the head after death. He requested to have a copy of that part of the letter pointing out the development of the organs, and the phrenological deductions. He returned it with a note, merely saying, " I have marked with " a line underneath those parts of the estimate which are " correct." *(To save repetition, the words so marked are printed in italics in the foregoing copy.)* By a strict injunction from the medical gentleman, who is of the highest respectability, and my own promise given to him, I am bound not to commit his name to paper; nor did he even tell me the name of his late patient, the subject in question; but, in describing the case afterwards to a third person, a Mr P. of Charing-Cross, he informed me it must of necessity be that of Mr M., upwards of thirty years

minister of a Baptist congregation, of which he himself was a member. I do not, therefore, think that I commit any breach of confidence in stating thus far. It appears that Mr M. was first brought up to the trade of watch-making, but which he soon abandoned for pursuits more congenial to his taste and inclinations. By great application he became a scholar and a man of considerable learning. Besides what I learned from his medical friend, Mr P. spoke of him in terms of the highest respect, as a minister esteemed by all his congregation; as a man of most exemplary conduct, and of the strictest integrity; he also agrees as to his care and economy in the management of his own affairs.

The anatomical description of the brain, as given by the gentleman who opened the head, I cannot send to the Society at present, as I find the copy I have too imperfect. He concludes, however, by saying, "It appears that the "parts of the brain which had become pulpy, were those "in which GALL places the organs of Prudence and Cir-"cumspection (*cautiousness*) for which this gentleman had "been remarkable prior to his illness, which lasted six "years, but which he rapidly lost after its commencement. "He became at length perfectly foolish; his mind retain-"ing no distinct ideas, except on theological subjects, on "which he always gave consistent answers."

Analysis of the preceding Sketch.

BY MR GEORGE COMBE.

It will be observed, that Mr DONKIN communicated the information that the individual whose cast he sent, "had

" received a good education, and moved in enlightened " society." I was thus made acquainted with the causes which tended to modify the direction of the natural dispositions; but, besides, the head stands in one of the extremes formerly mentioned, in which nature controls rather than is modified by external circumstances.

The first observation is, " *that the individual would be* " *decidedly moral and intellectual, and little prone to ani-* " *mal indulgence.*" This inference is founded on the great preponderance of the organs of the moral sentiments and intellectual faculties, over those of the animal propensities. It is necessary only to glance at the cast or engraving of the head to perceive, that there is very little brain at the base behind the ear; that the coronal surface, the seat of the moral sentiments, is not only broad, but elevated, and that the portion of brain extending from the ear to the fore-head, including the organs of the intellectual powers, is also large. The next observation is, " *that he would be scrupulous* " *and honourable in the extreme, with a great aversion to* " *debt.*" The organs of *conscientiousness*, *veneration*, and *love of approbation*, are all large, so that the natural sentiment of justice,—the dictates of religion,—and regard to the opinion of society,—would concur in prompting the individual to virtuous conduct. In several instances in real life, in which a large development of *conscientiousness* was joined with *self-esteem* and *love of approbation* large, I have observed, that the individual was as anxious to keep out of debt, as a person of opposite dispositions was ready to get into it; and, on this observation, the above inference is founded.

" *Ambitious of distinction or desirous to please.*" This characteristic depends on the *love of approbation.* If the individual move in the public eye, this sentiment will prompt him to desire distinction; if in a private sphere, only to please those with whom he associates.

"*Exceedingly modest, and most esteemed by those who "knew him best.*" Modesty arises from a great endowment of *love of approbation*, *cautiousness* and *conscientiousness*, generally joined with a considerable *self-esteem*, and sometimes with moderate or defective *combativeness;* and this combination occurs in the individual in question. Being modest, necessarily implies that he would be most esteemed by those who knew him best.

"*His justice, though great, would not be severe; but "would be softened by benevolence, and elevated by venera-"tion.*" This remark explains itself, because the three organs mentioned in it are all large. A large *conscientiousness*, joined with much *firmness* and *destructiveness*, and little *benevolence*, produces extreme rigidness, and even severity of disposition. The individual will be disposed to perform justice up to the very letter of his obligation; but he will have a tendency to exact it with equal inflexibility, however incapable the person who owes it may be to satisfy thus amply his demands. The sentiment of *conscientiousness*, when combined with *veneration* and *benevolence*, produces dispositions, charitable, long-suffering, and humane, as well as scrupulously just.

"*The intellect would be penetrating, but would have a greater tendency to speculate on moral than on physical causes.*"—The intellect takes its direction from the predominating propensities or sentiments with which it is combined. When joined with much *acquisitiveness*, for example, it will be directed towards procuring wealth. When combined with great *love of approbation* and *ideality*, it will be turned towards acquiring fame. In the individual in question, *constructiveness*, and the knowing organs in general, which give the tendency to mechanical and physical pursuits, are moderate in size; whereas the organs of the moral sentiments, which furnish the mind with those

feelings on which ethics are founded, and the reflecting faculties which take cognizance of these, are possessed to a considerable extent. Hence the direction of his intellect towards moral speculations was inferred.

" *He would shine more in the private circle than in public.*"—This arises from natural modesty of disposition, the elements of which have already been explained. " *His* " *understanding would be slow, but sound in its conclusions ;* " *but he would be much troubled with doubts and difficulties* " *in his decisions.*" I have observed, in actual life, that when the endowment of *cautiousness* and *conscientiousness* preponderates over the degree of intellect possessed ; and, in particular, where *combativeness*, which gives courage, is small, slowness of decision, and extreme hesitation, are never-failing results. *Conscientiousness* produces an extreme desire of arriving at absolute truth, and *cautiousness* inspires with the fear of not having reached it ; and, unless the intellect be naturally so penetrating and comprehensive, as to present a clear perception of the whole bearing and relations of a case, at one glance, so as to satisfy these sentiments, no alternative remains, but for the understanding to employ repeated efforts to accomplish that which it cannot effect by one exertion of its powers ; with such a combination of feelings, clear intellectual perceptions must be obtained, before the mind can feel satisfied that all is right. Mr Donkin's correspondent does not speak of the correctness of this inference in the individual in question, which I regret, as the point is of importance. He does not, however, say that it is erroneous ; and, from numerous observations in real life, I am inclined to think, that if he had possessed sufficiently close opportunities of observation, he would have recognised its truth.

" *The individual would not worship wealth, but he would* " *have a prudent regard for property, and would calculate*

"*his expences, and his income, so as to keep the former* "*considerably within the latter.*"—*Acquisitiveness* gives the desire to obtain property, and *self-esteem* produces that regard to self-interest which prompts one to hold it when acquired; and both of these are well developed in the subject of the present case. When to these faculties are added, as in him, a powerful *conscientiousness*, *cautiousness*, and *love of approbation*, there is superadded to the selfish feelings, a great desire of acquiring wealth, as the means of doing justice, of averting want, and of obtaining the respect of the world; so that, in the person in question, every motive calculated to produce the effect mentioned in the sketch was combined.

"*He would be alive to music.*"—This evidently depends upon the development of the organ of tune. It is not spoken to in the remarks by Mr DONKIN's friend. "*He would* "*be religious, and a sincere worshipper of* GOD." This inference is founded on the possession of the faculties of *veneration*, *hope*, and *conscientiousness*, joined with a respectable endowment of *intellect*.

The present application of Phrenology is highly important, because, on its practicability will depend, in a great degree, the utility of the science. If cerebral development indicates natural talents and dispositions, then the science will afford some aid in enabling parents to dedicate their children to those pursuits in which they are most fitted to excel, and will also be useful in enabling mankind in general, to judge of the qualifications of individuals with whom they may require to be connected in life. I have repeated experiments similar to that now detailed, in ten or twelve instances, and have seen at least ten cases more, by other phrenologists; and, in all, there was a great measure of success. At the same time, it is proper to state, that difficulties occasionally pre-

sented themselves, and inferences were sometimes drawn, which did not correspond with the dispositions in nature; but, in every such case, it turned out, that an unusual combination of faculties had presented itself, the effect of which the phrenologist had not had an opportunity of ascertaining, by actual observations in nature. For example, on one occasion, I met with a combination of large *secretiveness*, which gives the desire to conceal; and, when ill directed, leads to finesse; with large *love of approbation*, which gives the desire of publicity and ostentation; a full *conscientiousness*, which produces the sentiment of explicit truth, joined with *imitation*, which is one ingredient in a talent for personation, —all in one individual; and, being then unenlightened by observation concerning the precise result of the whole acting together, I felt great embarrassment. A conjecture which was hazarded, turned out to be, in some points, erroneous. When, however, the effects of this combination were explained, a step in advance in the science was gained. Nature is constant; and, as similar causes produce similar effects, on meeting with the same combination in another individual (and several instances have since occurred), it was easy to predicate correctly the tendencies which it would produce. Thus an intimate acquaintance with the cerebral development of numerous individuals, and ample opportunities of observing the dispositions and talents connected with each, are indispensably necessary to qualify any person for the practice of this branch of the science. Such a degree of reflective power also, as gives perception of motives, is necessary to the observer; for it is a fact, revealed by Phrenology, that persons in whom the reflecting faculties are exceedingly defective, do not perceive causation either in morals or in physic. Such persons see actions only as occurrences, and are blind to the motives which produce

them. They are the loudest scoffers at Phrenology, and are excusable, in every respect, for being so.

1.—*Observations on Evidence in favour of Phrenology, afforded by Reports on the Cerebral Development of Executed Criminals, as indicated by their Skulls.*

By Mr George Combe.

(Read 25th April 1822.)

HAVING occasionally heard objections stated against the validity of the evidence in favour of Phrenology, afforded by reports on the conduct and cerebral development of executed criminals, I beg to trouble the Society with a few remarks on the subject, rather with the view of drawing forth any objection which may exist, and exciting discussion upon it, than in the hope of throwing new light upon the merits of the question itself.

The objection I understand to be,—that the character of the criminal being known from the evidence on his trial, a little ingenuity will enable any member to make up a plausible case of concomitance betwixt the dispositions manifested, and the development of the brain, whatever the latter may be, and hence that the report, is an evidence of ingenuity on the part of the reporter but not of truth in the science. The same objection has also been stated against reports of

correspondence betwixt the development and dispositions of persons whose characters are previously known. Let us examine these objections.

Phrenology professes to be an inductive science, and those who cultivate it do not pretend to powers of divination. It is founded on a discovery by Dr GALL, that the size of particular portions of the brain bears a relation to the energy of particular mental powers or dispositions. Before the discovery could be made, Dr GALL of necessity required to be acquainted with the talents or dispositions of the individuals whose heads he observed, for the development itself carried no intimation of its connection with any faculty of the mind. Two points, therefore, were necessary to be established, to enable him to place his discovery on a philosophical footing: 1*st*, The possession of particular talents or mental dispositions, by particular individuals, required to be ascertained: 2*dly*, The concomitant development required to be obvious and perceptible to any person who made it his study to observe it. Now, any mental talent or propensity could be known only by its being manifested in actions. One individual, for instance, probably sung melodiously, and this was evidence that he possessed the musical talent; another was noted for pride and pomposity, and this proved that self-esteem was powerfully active in his mind. In the next place, to ascertain the cerebral development, which accompanied these powers, observation of the head was indispensible. Supposing, then, that a phrenologist should maintain the truth of any particular organ upon such evidence, what objections against it would be well founded?

An opponent might deny the mental manifestations, and say, that the individual in question could not sing, or that the other manifested no pride. The point could be brought to an issue only by an appeal to those who knew the individuals best, and had seen them in the greatest variety of

circumstances. If they testified to the reality of the manifestations, the latter would be proved. If, again, an opponent objected to the account of the development, and alleged that there was no test, rule, or standard, for judging of size, (and hence that it was easy for a phrenologist to call an organ large or small at his pleasure), and that he thus possessed innumerable means of escapes, however closely the difficulties were pressed; and, therefore, that he the opponent could not enter into particular objections, but was obliged to rest upon a general denial, that the organs were in size or appearance such as was asserted;—the reply to this statement would not be difficult. The phrenologists affirm, that an organ of *tune* should be very large in a very great musician, and small in a person destitute of musical talent. If, then, any member of this Society should present a report, stating, that he had heard A. B. play admirably on the violin, and had examined his head, and found a large organ of *tune*, it is obvious that the circumstances stated are quite possible in themselves; and, therefore, that these assertions afford *prima facie* evidence of their truth; and an opponent who wishes to rebut them must assert, that he had heard A. B. attempt to play, and perceived him fail; or that he had compared his organ of *tune* with that of C. D., who had no musical talent, and found the latter to be equally large. In short, he would be bound to come forward with a contradictory statement of facts, or to allow the phrenological testimony to stand unshaken.

Let us apply these principles to the case of a report on the head of an executed criminal. We have, on the one hand, the judicial record, and all the various circumstances attending the commission of the crime, to lead us to a knowledge of the motives which impelled him to the deed in question. It is difficult to conceive evidence which the

phrenologist would be less able to twist or misrepresent, or which is better entitled to be received as an authentic testimony, concerning the feelings and views under which the criminal acted. At all events, an opponent who questions it, is bound to bring forward some statement in point of fact or argument, of a positive and tangible nature, to shew that it is fallacious, and is not entitled to get the better of it by a simple denial.

In the next place, the phrenologist produces the skull itself, or a cast of it, as evidence of the development. He assumes as a principle fixed by previous inquiry, that the skull indicates the development of the brain; and he then proceeds to state in what manner he connects the skull in his hands with the criminal. He mentions who sent the skull, or who took the cast; and proves that the one exhibited is authentic and genuine. Having done so, he specifies the development of organs which it indicates. If the skull shews that *combativeness* and *destructiveness*, and *acquisitiveness*, are large, and *benevolence* and *conscientiousness* small, and the record of the trial bears, that the criminal was an unprincipled thief, and an atrocious murderer, he draws the conclusion, that the organs and dispositions correspond, and is entitled to represent this case as an additional proof that these parts of the brain are connected with the tendencies ascribed to them in the phrenological system.

An opponent who would contest this argument is not entitled to reply, that he perceives a development, but cannot tell whether it is large or small; or that the phrenologist may juggle among the combinations, and assert what he pleases, without fear of contradiction. The localities of the organs are designated on casts in the hands of the public; and no member of this Society, to serve a purpose, could maintain, that the organ of *destructiveness* lay under the

centre of the frontal bone, or that of *benevolence* under the temporal bone. The opponent, therefore, possesses the means of determining precisely the *situation* of the organs, if he chooses to take the trouble. Again, the real *size* of the organs is equally capable of being ascertained. Many casts of skulls of individuals of the most opposite characters are sold in the shops, or exhibited to the public in the Society's collection; and an opponent is bound to compare one with another, and to make reasonable exertions, to discover the actual size of any particular organ, about which he means to dispute, before he is entitled philosophically to assert, that it is not such as it is represented to be. In the third place, the *functions* of the faculties are stated in the books of Phrenology; and a disciple can no more pretend that the organ marked *destructiveness* serves to feel *benevolence*, and that the one marked *hope* serves to feel *fear*, than he can pretend that the ear sees, or the eye hears. In the last place, the effect of the combinations is matter of philosophical inference, on which an opponent is bound to reason fairly and logically, before any conclusion, which he may draw, is entitled to the least weight. If *combativeness* and *destructiveness* be large, and *benevolence*, *love of approbation*, and *conscientiousness* small, little skill is requisite to infer that the dispositions will be ardent, cruel and unjust. If a phrenologist, with such a combination in hand, were to represent the character as mild, benevolent and honest, how easily might he be refuted; or, to take another example, if two individuals were found to possess a large development of *acquisitiveness*, but if, in the one, *conscientiousness* was very large, and in the other very small, and we were told that the one was a thief, and the other an honest man, how complete would the refutation be, if the one, possessing the large *conscientiousness*, were found to be the rogue. No principle would bear out the inference, that *acquisitive-*

ness, directed by a strong sentiment of justice, leads to stealing; whereas, if the results were exactly reversed, every one would see, that it was a just deduction to conclude, that the desire of property, directed by a sense of duty, would lead to honourable enterprise to acquire wealth; while the same desire, undirected by justice, might lead to theft. The combinations, therefore, do not present juggling intricacies, but philosophical modifications of the manifestations of one power by another. Skill, and some comprehensiveness of understanding, are requisite to trace the effects, but principle is always to be found to direct the judgment; and an ignorant and impatient objector has no good ground of complaint that he does not see through the maze, if he has not bestowed adequate attention, or possesses adequate ability to unravel it.

If, therefore, the record of the trial bears testimony to the dispositions of the criminal; if the authenticity of the skull or cast is established; if the development of the organs is matter of fact which is capable of ascertainment by inspection; if the functions of the organs are set forth in the works on Phrenology; and if the effects of the combinations are regulated, by fixed and philosophical principles,—I do not see, in what respect, a report on the head of an executed criminal is objectionable as evidence in favour of the science.

In other arts or sciences, such cavilling objections as we have supposed are not listened to. If a surgeon reports that a case of hepatitis fell under his observation; that the symptoms were so and so; and that, on dissection, the liver presented such and such appearances,—his report is received as testimony, according to the known veracity and intelligence of the individual; although, owing to the interment of the patient, the facts, in nine cases out of ten, are not susceptible of verification. No person in his senses would

think of denying the appearances described, on mere hypothetical suppositions of difficulty in tracing them, and facilities for imposition in the narration of them. The *bona fides* and *competency* of a reporter must be admitted, till sufficient reason be shewn for doubting them; and mere ignorance and aversion to inquiry occurring in the objector, are never, in any science, held to afford philosophical reasons for questioning a statement.

As to the effects of the combinations, again, in the theory of gravitation, the centripetal is held to control the centrifugal force of the planets; and distance is held to modify the effects of size. In chemistry, an alkali is admitted to affect the action of an acid. In medicine, age, climate, constitution, are admitted to modify the effects of particular medicines; and, in short, in every science which takes cognizance of agents, one power is admitted to modify the action of another; and yet no person in his senses thinks of representing these modifying effects as destroying all certainty, and opening wide doors for imposition and deceit in these several branches of knowledge. No reason, therefore, can be discovered, why such a notion should be deemed unphilosophical, when applied to Phrenology. In the sciences now alluded to, the combinations increase the difficulties of attaining a correct knowledge of the peculiar qualities of the elements; but these difficulties are surmounted by patient and acute investigation; and Phrenology, in requiring application and intelligence for its cultivation, is, in this respect, only on a par with the other branches of human knowledge.

The chief difficulty in tracing the effects of the combinations in Phrenology, arises from an erroneous notion, derived from the analogies of physical science, that two faculties of opposite functions, such as *benevolence* and *destructiveness*, destroy each other, and that the possessor should

then manifest neither. If we look into the conduct of men, however, we will find, that an individual may be prone to anger (the effect of large *destructiveness)*, and nevertheless, in his general conduct, be remarkable for goodness of heart, and kindness of disposition,—the result of a powerful *benevolence.* Again, it is supposed that *benevolence* and *acquisitiveness* ought to counteract each other, and produce a state of indifference both to the acquisition of wealth, and to the bestowing of charity, in the individual in whom they are combined; whereas, the true principle is, that a person in whom both organs are large, will manifest each so as not to offend the other; for example, he will be kind and charitable, by bestowing his influence, advice, or personal trouble, but not his money; thus manifesting real warmth of heart, although averse to part with his property, in consequence of *acquisitiveness* being strong. An individual, on the other hand, in whom *acquisitiveness* is large, and *benevolence* small, would not shew kindness either in giving money or in taking personal trouble. If, again, *benevolence* be large, and *acquisitiveness* small, it is probable that the possessor of this combination would give away money very readily, because he felt no strong desire to retain it, while he could not be troubled in making any great personal exertions in favour of a person whom his *benevolence* disposed him to serve. Thus this science must be studied according to its own laws, and not judged of by inapplicable analogies, and false and superficial views, drawn from other sciences; and, when sedulously cultivated in this manner, it will not fail to yield an abundant harvest of useful knowledge.

2.—*Report on the Development of James Gordon, executed at Dumfries, 6th June* 1821, *for the murder of John Elliot, a Pedlar Boy.*

By Mr Robert Buchanan.

(Read 25th April 1822.*)*

Our information regarding the life of Gordon, previous to the commission of that act which brought him to the scaffold, is derived chiefly from the newspaper in which the judicial proceedings at his trial were published. It is neither copious nor circumstantial: and although it might have been satisfactory to have known more particularly the history of an individual who was capable of performing so brutal a deed, the general outline given is perhaps sufficient for our purpose.

Gordon was a native of the county of Mayo, in Ireland, and of the Roman Catholic persuasion. His person was short, his face much marked with the small-pox, and the general expression of his countenance repulsive and disagreeable. Like too many of his countrymen, he appears to have been deplorably ignorant, and could neither read nor write. No mention is made of the period at which he

quitted Ireland; but if the reports which prevailed about the time of his execution be worthy of belief, his change of country was the necessary consequence of some deeds of violence he had committed at home. According to his own account, he had been lingering, in a very unsettled manner, in the south of Scotland, for five or six years before the perpetration of the murder. He seems to have procured the means of subsistence, by working occasionally on different farms for a few weeks or days, as he found employment; and either to have begged during the rest of his time, or lived by means still more equivocal.

The poor boy of whose death he was accused, is supposed to have been born at Hexham, in England. And, being rather weak in his intellects, and of a delicate frame of body, had gained a livelihood by carrying a small box, containing a few trifling articles of hardware and stationery, through the pastoral parishes that lie contiguous to the Border. Judging from the evidence of the witnesses, as well as from the specimens that were exhibited to the Court, the whole amount of the pedlar Elliot's property could scarcely have exceeded the value of a few shillings; and this affords a striking proof of the utter disregard of human life displayed by the murderer.

It appears that, late in the evening of the 11th November 1820, Elliot arrived at a farm-house in the parish of Canobie; and that Gordon also came to the same place a few minutes afterwards. The former, according to the evidence of the family, carried a red box, and appeared a simple looking lad; and, from his conversation with Gordon, at this place, they appeared to have met here for the first time. Next day was Sunday; and, accordingly, they both remained at the farm till the following morning, when they set out together. They were seen during the day, travelling towards Eskdalemuir, and the same night they

arrived at the farm of Coat in that parish. Gordon had two hare-skins in his hand, and the pedlar his box, the contents of which he as usual offered for sale to the inmates of the house. After spending the night here, they again set forth on the morning of Tuesday the 14th; Gordon telling the boy he would get a good dinner when he came to Thirlstane, the residence of Captain NAPIER. The parties were seen together, for the last time, by two women and a girl, who met them travelling along the road near Burncleugh. Gordon wore on his feet a pair of heavy clogs, which particularly attracted the notice of the girl, from the "queer mark," to use her own phrase, which they imprinted in the mud. On this day, the murder is supposed to have been committed. Towards the evening, Gordon was met walking alone, by a farmer and his shepherd, at a place called Overkirk-hope. He had the red box slung across his shoulder; and the shepherd having seen him frequently before, said, "You have got a box now, I see." To which Gordon readily answered, "Ou aye." He asked them for lodgings, and being refused, continued his route; and, about an hour after, reached the farm of Cossershill, in the parish of Ettrick. The farmer did not see him till after family-worship, when his confused and agitated manner struck him so forcibly, that he mentioned the circumstance to his wife and mother, on going into the parlour. The good woman had observed that Gordon did not join in the psalm, and spoke of it to him, when he merely replied, that "he was not book learned." He left this place early next morning, and spent the following night at Hyndhope, where he sold several of the little articles contained in the box; and next day, was again seen still carrying the box and the hare-skins. The box, however, was found that evening, at the side of a streamlet, by a shepherd boy, Gordon having thrown it away, after rifling it of its con-

tents, which he afterwards carried about with him in a small harn bag.

The body of Elliot was not found till the 26th, when it was discovered at a lonely spot called Steel-bush-edge, in Eskdalemuir, by a shepherd boy, who was employed in tending his father's sheep. The body was stretched on the grass, with one hand across the breast, and the other extended on the ground. The boy immediately went home, and related what he had seen to his family, when his father, yoking a cart, and taking another of his sons along with him, they all three went to Steel-bush-edge, and wrapping the body in a plaid, placed it in the cart. By this time it was getting dark; but still they could observe the marks of blood where the head of the body had lain. The farmer, on his return, summoned several of his neighbours, and sent for a surgeon to the nearest village, in whose presence the body was examined. It now appeared there was a cut or contusion on the chin, a cut above the right eye, and a great many wounds on the back of the head;—wounds which, in the surgeon's opinion, the boy could not have survived, even if he had been found immediately after they were inflicted. The family by whom the body had been discovered, now recollected a man and a boy having come to their house a short time before this, whose appearance they remembered so minutely as to enable them to identify the body of the boy. The man had worn clogs or wooden-shoes, strongly bound with iron, and shod on the heels with the same metal; the mark of which they also had observed in the mud. Next day the body was interred; and a few hours afterwards, the same boy who first discovered it being again on the heights, observed a pair of iron-shod clogs, lying within fourteen yards of the spot where Elliot's body had been found. On this he once more returned home, and related the circum-

stance to his father, who, with his wife and the surgeon, went to the place and brought them away. Information having, by this time, been given to the Sheriff, the body was disinterred and examined anew by two surgeons. These gentlemen concurred in opinion, that the wounds must have been given by an instrument not very sharp, such as the iron-hoop of a clog; and having applied the forepart of one of the clogs to a semi-circular wound in the back-part of the deceased's head, they found it exactly to correspond. The contents of the boy's pack were easily traced to Gordon, as he had, subsequently to the murder, shewn them to several persons, and sold part of them to others. In consequence he was apprehended at Nairn soon afterwards. In May following, he was tried before the Circuit Court of Justiciary at Dumfries, for the crime of murdering the pedlar boy, and having been found guilty, was condemned to suffer death.

During the period which elapsed between his trial and execution, he held no intercourse with any of his relatives, although it was known he had a father, and several brothers and sisters still in life. He saw no one but his priest, who attended him assiduously, and apparently not without effect. His behaviour to the Court when sentence was pronounced upon him had been highly indecorous; and at that time he declared himself innocent of the crime for which he had been condemned. When led back to his prison, however, his hardened feelings seem, in some measure, to have given way. The solitude of a dungeon, whose door he must regard as the threshold of eternity, could hardly fail to stir up some feeling of remorse or contrition; and, accordingly, when he appeared for the last time on the stage of human life, his mind had undergone a considerable change. Instead of reviling, as formerly, the Jury by whose verdict he was to suffer, he now prayed both for

them and for his Judges. And although he never distinctly acknowledged himself guilty of the horrid deed, he admitted, on the scaffold, the justice of his punishment. At the moment when the fatal signal dropped from his hand, a circumstance occurred, which, a century ago, would have been regarded as the voice of Heaven denouncing the murderer; and proclaiming to the spectators, that "whoso shed-"deth blood, by men shall his blood be shed." A flash of the most vivid lightning seemed for a moment to envelope him in its flame, and the tremendous peal of thunder which instantly followed was the last sound which fell upon his ear! His body was given for dissection to Dr MAXWELL of Dumfries, who presented the skull to the Society.

Having thus sketched the outline of Gordon's history, in so far as it is known to us, we shall now state the cerebral development, as indicated by the cranium, for examining which, the amplest opportunities were afforded; and afterwards enquire shortly, whether it is such as the doctrines of Phrenology would have led us to anticipate.

1. Amativeness,—moderate.
2. Philoprogenitiveness,—large.
3. Concentrativeness,—small.
4. Attachment,—full.
5. Combativeness,—full.
6. Destructiveness,—very large.
7. Constructiveness,—small.
8. Acquisitiveness,—full.
9. Secretiveness,—rather full.
10. Self-esteem,—full.
11. Love of Approbation,—full.
12. Cautiousness,—large.
13. Benevolence,—moderate.
14. Veneration,—large.
15. Hope,—full.
16. Ideality,—small.
17. Conscientiousness,—small.
18. Firmness,—rather small.
19. Lower Individuality,—large.
    Upper Individuality,—full.
20. Form,—full.
21. Size,—large.
22. Colouring,—small.
23. Locality,—full.
24. Order,—moderate.
25. Time,—small.
26. Number,—small.
27. Tune,--small.
28. Language, in so far as can be judged from an examination of the cranium only, —full.
29. Comparison,—small.
30. Causality,—small.
31. Wit,—small.
32. Imitation,—moderate.
    Wonder,—moderate.

Measurement of Gordon's Head.	Inches.
From Philoprogenitiveness to Lower Individuality,	6 9/10
Concentrativeness to Comparison,	6 5/8
Destructiveness to Destructiveness,	5 1/8
Meatus auditorius externus to Lower Individuality,	4 2/8
Ditto, to centre of Philoprogenitiveness,	4 2/8
Ditto to ditto of Firmness,	5 1/10
Cautiousness to Cautiousness,	5 2/8
Ideality to Ideality,	4 2/8

I have only to add, that, as this report was drawn up upon a short notice and from scanty materials, (and the period that has elapsed since the execution of Gordon having, besides, so materially limited the information respecting him,) it is hoped that the Society will look with indulgence on its imperfections.

When we compare the foregoing development with the conduct of the individual, it appears to correspond in a remarkable degree with his dispositions, both as indicated by what we know of his previous history, and by the circumstances attending the act for which he suffered. The head is altogether much below an average size, and, consequently, indicates corresponding weakness in the mental manifestations. Although his *self-esteem* and *love of approbation*, (which under proper regulation are important powers), are full, and *acquisitiveness* (leading to a desire of bettering his condition), is also full,—yet as we find that *constructiveness*, (which gives dexterity in manual operations, and when joined to the other powers just mentioned inspires a love of industry), is small,—that *concentrativeness* and *firmness*, (the one giving the power of directing the faculties in a combined action to one object,—and the other giving a perseverence and steadiness in whatever we undertake), are also small;—we might expect to find what seems to have been precisely the case, that this individual was an idle and inefficient workman, averse to any kind of

constant labour. When to this is added, the great deficiency of *conscientiousness*, we will not be surprised that he should be more willing to procure a livelihood by begging or theft; or, in short, by any means, however irregular, rather than by honest industry. Still, it may to many appear difficult to conjecture what was the motive which led him to commit the horrid act of murdering the poor defenceless half-witted lad, in the barbarous manner he did, when all he was to gain by it did not exceed a few shillings in value. I am, however, disposed to think, that all this is perfectly explicable, under the circumstances of the case, and that the development of Gordon leads us to a very clear view of the motives under which he acted. I have no doubt that the original moving cause which first prompted the deed, was Gordon's desire to possess himself of the pedlar's box. No doubt this box and all its contents appear to us of very small value, but it will be recollected that all ideas of value are comparative; and that though to us it may appear perfectly trifling and insignificant, it may have appeared very differently in the eyes of Gordon, who, it is more than probable, never possessed so much riches in the whole course of his life; and in his then wandering and unsettled mode of living, he might have no prospect of ever acquiring so much, in any other way. Besides, we are not merely to consider the actual value of the moveables in shillings and pence, but the importance which a person like him might naturally attach to the profession of a pedlar, and the *status* in society which he might acquire by the possession of a box and wares,—which his full endowment of *hope*, might induce him to imagine would, by good luck and good management, conduct him to a state of wealth and independence, far beyond any thing which could be actually reali-

zed from such slender means *. All this, it is easy to see, might have presented to this man, who, besides being utterly uneducated, seems to have possessed a very slender endowment of reflective powers,—a temptation which he was quite unable to resist; and when, in addition to this, we consider the opportunity that was afforded by the wild solitude they were traversing, the weakly constitution of Elliot, and also his defective intellect, both of which would incapacitate him from offering any effectual resistance, we may cease to wonder at this result. The development of Gordon shews us a man who would never have committed a murder which required boldness or determination. His *cautiousness* was large, and his *combativeness* not more than full, while *firmness* and *concentrativeness* were both very deficient. But from this boy he had nothing to fear,—and possessing no restraining feelings of a conscientious or benevolent kind, and the solitude leaving him without any fear of interruption, he had proceeded under the influence of the motive we have mentioned, and of his *destructiveness*, which we have seen was very large, to perpetrate the bloody deed. It is impossible to trace these feelings and motives more minutely. Perhaps he might have first endeavoured to possess himself of the property without murdering the boy, and that enraged at his resistance he had killed him; or he may have meditated the murder from the first, thinking that this was the best or the only means of preventing the robbery from being discovered. Neither of these suppositions is inconsistent with the development; but at all events the great *destructiveness* and deficient *benevolence*, shew themselves conspicuously in the brutal ferocity with which the murder appears at last to have been perpetrated,—and in the barbarous method taken to extinguish the poor boy's life, by beating him about the head with an iron-heeled shoe.

* Vide the story of Alnaschar in the Arabian Nights' Tales.

The state of the body shewed that the vital spark had not been extinguished by one blow, for every part of the deceased's head attested the ferocious spirit of his destroyer, and would almost persuade us, that this spirit had continued to operate even when its violence could not longer affect the unfortunate sufferer.

The behaviour of Gordon *after* the murder, corresponds with the development in a way equally exact. Possessing, as we have seen, a full endowment of *hope*, *deficient reflection*, and no great *secretiveness*, it would never occur to him that it was necessary to use any precautions to prevent detection of the crimes he had committed; and of which, at the time they were committed, there was no living witness. Unable himself to trace or to foresee the consequences, his *hope* might suggest to him that no person would ever know, what no mortal eye had seen perpetrated; and not possessing that strong desire of concealment, and that instinctive power of veiling his acts and intents which is given by *secretiveness*, he proceeded in a manner which was sure to lead to a discovery. Instead of taking measures to conceal the body, he seems to have left it on the very spot on which he deprived it of life. And far from endeavouring to escape, by withdrawing himself from the country, he continued for some time wandering through the very country which Elliot used to frequent, and offering for sale those very articles by which the unfortunate boy had obtained his support.

On examining the development farther, one might perhaps have imagined that the large organ of *veneration* would, in some degree, have supplied the place of *benevolence* and *conscientiousness*, and restrained his murderous arm. But from the degrading state of ignorance in which he was found, as well as from the short outline of his history, which we have been enabled to give, it appears,

exceedingly probable, that this organ had received but little cultivation; without which, considering that he was possessed of powerful passions, with moral sentiments, and intellectual faculties of the lowest order, its influence, at such a moment, could hardly be felt. At the same time, we are inclined to regard his emotion at the farm-house, during the family devotions, as arising principally from this source. It was only a few hours before that he had hurried an unoffending fellow mortal into the presence of that Being before whom his knee was now bent;—and to a mind naturally susceptible of a religious feeling, the situation in which Gordon now found himself, could not fail, by awakening it, to fill him with temporary remorse.

If a deed of such horrid barbarity had been found in connection with a cerebral development such as was at one time assigned to Gordon, by some enemies of our science, they might, with some shew of reason, have exulted in the prospect of its overthrow. If, instead of the large *destructiveness*, and full *combativeness* and *acquisitiveness*, with the weak organs of *conscientiousness* and *benevolence* which his cranium exhibits, the last two had been found large, and the first three moderate or small, the disciples of Phrenology might have trembled for its fate. But when, in addition to the ominous magnitude of the most fatal propensities, there is at the same time discovered so great a deficiency in those sentiments and intellectual powers which might have opposed their influence, the case presents little to perplex the phrenologist. And, in this instance, his advantage over the mere metaphysicians is strikingly apparent. Had the case of Gordon been presented to the latter, and an explanation requested of the source in his mental constitution, from which this brutal act had proceeded, they would probably have extricated themselves from the difficulty, by perplexing us with some vague and indefinite terms of *power* and *faculty*. "Quand nous voyons

un effet," says a French writer, on the operations of the mind, " dont la cause nous est inconnue, nous nous imaginons l'avoir decouverte lorsque nous avons joint à cet effet un mot général de vertu, ou de faculté; qui ne forme dans notre esprit aucune autre idée, si non que cet effet à quelque cause, ce que nous savions bien avant d'avoir trouvé ce mot!" If, in the present instance, however, they declined pursuing this unsatisfactory course, the only other they could with safety adopt, would be at once to acknowledge the case to be altogether monstrous and anomalous. Nor need it excite astonishment that they should be forced to take refuge under such a cover. For, as their system of the mental constitution of man is nothing more than an imperfect account of their own nature—their science supplying them with no power to draw aside the veil which conceals that of their neighbour—they would most probably conclude, and perhaps with justice, that it contained no principle which the circumstances of this case could have instigated to the performance of such a deed. And it may be added, without pretending, in any degree, to detract from the real merits of the established philosophy of the mind, that any attempt to apply it, in investigating the sources of human action, would most frequently lead to the same uncertain result.

Gordon's whole conduct subsequent to the murder appears so like infatuation, that, on viewing it in conjunction with the smallness of the brain, we are led almost to suspect either the presence of mental disease, or a near approach to idiocy, in the individual. He seems to have made no attempt to conceal the body, but to have left it carelessly where it was murdered; and, instead of providing for his safety, by removing to a distant part of the country, he continued, till the period of his apprehension, wandering through the very neighbourhood which Elliot used to frequent, and offering for sale those very articles by which his unfortunate victim had formerly obtained his support.

Such a proceeding strongly confirms the opinion his development led us to form concerning him, viz. that he felt little true remorse for the crime of which he had been guilty, and that his intellectual faculties were too weak to enable him to adopt the proper means of saving himself from its consequences.

3.—*Remarks on the Case of John Bellingham, the Assassin of Mr Perceval.*

By Sir George Stewart Mackenzie, Baronet.

(Read 20th March 1823.*)*

No individual, fit to live in society, ever expressed a thought, that the passions and propensities of our nature should not be kept in due subjection to our better principles. Even men of very lax principles, and loose practice, admit that they err in their conduct; and they seldom offer any excuse, but that they cannot resist their propensities. This, in so far as it regards the welfare of society, cannot be admitted as any extenuation; because, when there is sufficient and sound intellect, consciousness, for the most part, satisfies the offending individual that his conduct is improper. Although reason may excuse a man for offending against any law, human or divine, of which he may be ignorant, he cannot be forgiven by society; because, if this principle were established, ignorance would be pleaded in every case, and men, who did not wish to control their propensities, would take care to keep themselves in ignorance, and out of the pale of responsibility.

It is a fixed rule in human institutions, that all men are responsible to the laws, with the exception of insane persons, and idiots from birth. There has not, however, been

any great pains taken to define either insanity or idiotism, nor to point out where these end, and rationality begins. An idiot, or an insane person, may, by the excitement of fear, be prevented from committing certain actions; and he may be brought to consider himself so far responsible, as to be aware that, if he commit certain actions, to gratify his propensities, bodily suffering will follow. This is, in reality, the proper idea of responsibility, with this difference, that a sane person is guided by reason more than by fear to submit to the laws, and to hold himself responsible; while an idiot or madman merely associates certain actions with bodily suffering, the fear of which alone directs his conduct. There are degrees of idiotism so very low, that even this association can neither be remembered nor formed. But in ascending towards sanity, it is extremely difficult, by means of evidence, to prove where sanity begins; or in descending, to discover where it ends. The only distinction held sufficient by the law is, that he is an idiot or a madman who cannot distinguish right from wrong. This, however, does not, either legally or philosophically, enable us to see the limit between rationality and idiotism, sanity and insanity. The power of being able to distinguish right from wrong, or the want of that power, must to the law be proved; but the only proof that can be brought before a judicial tribunal, is the evidence of speech and action. Neither of these can prove that there exists no consciousness of action, or no meaning. They cannot prove absence of intention or of motive. It is certain that idiots and madmen, like sane persons, perform actions that they may derive gratification from them; and all that can be proved from their conduct is, that they act under the influence of uncontrolled impulse or propensity, or that the power of control is absent. But what is this power of control; and how are we to ascertain when it is

present, and when it is absent? This question involves a great deal that is important to society, and to the due administration of justice; and is the branch of medical jurisprudence of by far the greatest consequence. No system of philosophy that existed before the promulgation of Phrenology, has ever held out the means of answering this question; and it is one of those admirable results which must follow the discoveries of GALL, that we shall be able, in all cases when disease is absent, to decide with certainty, whether a man be responsible for his actions, or otherwise; and to direct punishment, discipline or education, for those whose actions have rendered them amenable to the laws.

It is not a matter of doubt among men in general, that they differ extremely from each other in talents, in temper, in disposition, and in a thousand particulars, as various as the forms and colours of the face. Having had the same education, one man is proud, another is humble; one man is passionate, another is meek; one man is quick, another slow in apprehension; and there is no difficulty in pointing out numerous and well-marked distinctions, for which neither education nor habit will account. When we look around us, and observe our fellow men with attention, we soon discover that the gradations from idiotism to brilliant powers, are not only exceedingly minute, but that, in fact, the differences and varieties in human intelligences, and human propensities, are innumerable. If we take as the highest degree of intelligence, a man who is perfect in the knowledge of every science, of every art, and of literature in all its branches, we do not find that, in the descent of human intellect, there is a regular diminution of intelligence with respect to every branch of knowledge. Some men, indeed, there are, who possess some knowledge, more or less, of every thing; but intelligence commonly varies in

a different manner. One man may be remarkable for metaphysical acumen, who is yet incapable of understanding or arranging a piece of mechanism. One man may have a perfect knowledge of languages, and yet be utterly ignorant and incapable of instruction in the physical sciences. A man may exhibit almost miracles in calculation, and be to all intents and purposes an idiot in every thing else.

Similar remarks may be made on the moral characters of mankind; and, in short, it is an irresistible fact, that men differ in dispositions as well as in intellect, and these, too, owing to natural constitution. Men are to be found who have been well educated, whom nothing but the fear of detection and punishment prevents from committing crimes; and others are to be found, wholly uneducated, whom no consideration whatever will induce to deviate from innocence.

Although many may be disposed to deny an abstract gradation in responsibility, it is well known that judges and juries are in the habit of distinguishing cases of different responsibility; though upon principles so uncertain, as often to lead to the escape of those who deserve punishment the most. When several persons have committed a crime in combination, it is no uncommon thing for a distinction to be made in the degree of punishment awarded to each, according to the activity that each displayed in the perpetration. It is quite possible, however, that the very persons who may be lightly punished, because they had stood aloof, might have been the instigators, and the real authors of the crime. It is true that judges must abide by the verdict of a jury, and by the law, in pronouncing sentence; and the jury must decide according to evidence. But no consideration is ever given to the possibility of discovering the motives that led to the commission of crime, although, by our law, *malice prepense* must be proved in the case of

murder, and wicked intention in minor crimes. These, however, are more frequently taken for granted than proved. If a man break into a house for the purpose of stealing, and without any intention to commit murder,—with a positive resolution not to commit murder,—circumstances may arise to render it necessary, for his own safety, to kill some one. Here is no *malice prepense*; but the guilt of murder may be held to be complete, because it was committed during the perpetration of another crime. Yet a man in such circumstances is less guilty for having killed another, in his own defence, than another who commits murder, in order to enable him to obtain his prey. It is unfortunate that our laws make so little distinction in the degrees of criminality, and that the same punishment is awarded to crimes of very different magnitude. If a man break into a house to steal, no matter what, he is sure that, if detected and taken, he will suffer death; but he is also certain that no greater punishment can await him, if he should kill any one, either in self-defence or deliberately; and as there may be many cases in which it may be for the interest, so to speak, of a thief, that he should kill either before or after the perpetration of theft, the laws thus virtually encourage murder; a fact abundantly horrible to justify their alteration.

To every one who is capable of studying and appreciating the value of the discoveries of Drs Gall and Spurzheim, the utility of a phrenological examination of criminals, before they are brought to trial, will be sufficiently obvious. The result of such an examination in the hands of the public prosecutor and judges, would be an infallible direction for the degree of punishment, and for the means to be pursued in attempting the reformation of criminals. Without the aid of Phrenology, all the efforts of the benevolent will be in vain, at least the directions of their efforts must be

uncertain, and their good effects the result of mere chance; and it is to be regretted, that, while so much benevolence is in action, the doctrines of Phrenology are not resorted to, and tried by the best, as it is the most severe, test that can be applied to them.

The circumstances attending the death of Mr Perceval, were sufficiently remarkable to have arrested the attention of the philosopher; and had not the horror excited by his murder hurried all towards the speedy infliction of punishment, it is probable a different fate might have awaited the wretched assassin. He had no wish for concealment; the act was done in open day, and deliberately in the presence of many. There was no attempt to escape,—the murderer having accomplished his purpose, quietly sat down; and avowed, and attempted to justify, what he had done. The particulars on which I now propose to offer a few comments, with the view to shew the propriety and necessity of our criminal law having more regard to the means of discovering the degree of responsibility that ought to be attached to individual criminals, I have taken from the published account of Bellingham's life and trial. I hope also to shew how little understood the distinction between sanity and insanity is, and also between intelligence and idiotism; which latter distinction is unquestionably as necessary as the former, in attaining the substantial ends of justice, when ability or inability to distinguish right from wrong, are the tests by which guilt or innocence are to be ascertained.

John Bellingham, the murderer of Mr Perceval, was, it is said, about thirty-six years of age. He was born at St Neots in Huntingdonshire, and was brought up to mercantile business in a counting-house in London. Several years before the murder he repaired to Archangel, on an engagement with a Russian merchant, in whose employment

he continued as a clerk for about three years; but having formed a connection with a Mr Borbecker, he returned to England, in order to seek a contract for the supply of timber. In prosecution of this undertaking, he entered into considerable engagements with the merchants of Hull, and several vessels were in consequence sent for cargoes to Archangel. In the mean time, however, Mr Borbecker had become bankrupt; the vessels of course returned in ballast; and the disappointed merchants, holding Bellingham liable for the loss they sustained by the non-fulfilment of his contract, threw him into prison on charges for a very considerable amount. Being a man of violent temper, and of a warm or rather infatuated imagination, he was apt to consider every misfortune which overtook him, not as a necessary consequence of his own imprudence, or as one of those inevitable calamities to which mankind are exposed; but as an intended injury, and an unjustifiable aggression. From this strange and almost unaccountable perversity of judgment, he considered his arrest by the merchants of Hull, who had been so unfortunate as to have transactions with him, as an act of flagrant injustice against an innocent man; and, under this impression, he wrote and published, during his confinement, a pamphlet against them, full of virulent invective, and replete with sarcasm and ridicule.

Having by some means recovered his liberty, he again repaired to Archangel, where, from his impetuous disposition, he embarked in various complicated and extensive speculations, which ended, as might have been expected, in involving him in still greater difficulties and inextricable embarrassments. Labouring under his usual mistaken impression, that he himself was never to blame for the consequences of his visionary and inconsiderate speculations, and imagining that he had only to make his schemes and his

ideal injuries known, in order to obtain protection and redress, he pestered the Government to such a degree with petition after petition, and with memorial upon memorial, that forbearance was at last exhausted, and he was, as now appears, with fortunate prudence, put under confinement, as a restraint on his turbulent and unmanageable proceedings. Smarting under this new and aggravated injury, he applied repeatedly to the British Minister at Archangel for protection, but without success. He was at length, however, liberated, and, despairing of redress abroad, returned to England, full of loud complaints against the injustice and oppression of the Russian Government.

He had married a Miss Mary Ann Neville, daughter of Mr Neville, merchant in Newry, by whom he had three children; and now took up his residence at Liverpool, where he again speculated as an insurance-broker, while Mrs Bellingham pursued the business of a milliner. Though thus engaged, he presented at intervals memorials to Government on the subject of his claims; and, notwithstanding he was repeatedly informed that Government could not interfere in his affairs, he continued, with invincible obstinacy and indefatigable perseverance, to urge his unreasonable if not unjustifiable demands.

That he might be better able to push his claims, he resided for some time in London; and among the last of his papers is the following letter to the Members of Parliament individually, which is sufficient to shew the nature of his applications.

" SIR,

" Having suffered, in a most unprecedented manner, for a period of six years in Russia, on my return two years ago, I made a representation of the case to various departments of his Majesty's Government; and, in January last, I applied for redress, by petition, to his Royal Highness the Prince Regent, who was graciously pleased to refer the affair to His Most Ho-

nourable Privy Council. The Council declined to act in the business, upon which I requested an official copy of their Lordships' decision, and was answered by the Clerk of the Council it could not be complied with. In consequence, I renewed my application to his Royal Highness the Prince Regent, accompanied by the inclosed petition to the House of Commons, praying his Royal Highness, that, as the affair was purely national, he would be graciously pleased to direct my complaint to be laid before Parliament.

" Having borne the weight of this unhappy affair abroad, for a series of years, in a manifold way, on my return home, I had the mortification to find my affairs gone to ruin, my property sold up, my family distracted, and suffering in the most severe manner, by the inevitable ruinous consequences of my detention; and for the preceding two years they had not been able to ascertain whether I was alive or dead. Since my return, I have not only been bereaved of a further property (bequeathed in my absence), to make good the consequence of this business, but am now considerably involved, so fatal has it proved. Thus circumstanced, I trust I shall be pardoned in addressing the House of Commons individually, in the hope that, on the behalf of material justice, some member will do me the favour to bring forward my said petition, as common justice is all I solicit, and what every one will agree I ought to have; more especially as my sufferings for the last eight years have been almost too great for human nature to sustain.

" In soliciting your kind aid, I beg to be understood, that it is far from my intention, by this address, to complain of any party whatever, being convinced, that in no country upon earth is justice so purely administered as in this; and justice I am sure I shall have, so soon as the affair is known to the tribunal where alone it can be taken proper cognizance of. With assurance that my sole wish is to obtain what is right, without prejudice to any individual, I have the honour to be, Sir, your very humble and obedient servant,

" JOHN BELLINGHAM."

" No. 9. New Millman Street, }
Mar. 11. 1812." }

" To the Honourable the House of Commons of the United Kingdom of Great Britain and Ireland, in Parliament assembled, the humble PETITION of John Bellingham of Liverpool, merchant;

" *Sheweth,*

" That, in the year 1804, your petitioner went from this country to Archangel in Russia, for mercantile purposes; and, ha-

ving dispatched his vessels, and all his other affairs there, petitioner took out his petrosniek from the Governor-General on the 15th of November in the same year, for the purpose of returning home by the way of St Petersburg.

" That as your petitioner was on the verge of departure, he was seized, dragged out of his kabitsky, and thrown into prison, in consequence of an affidavit of a person named Solomon Van Briemen, declaring your petitioner to be indebted to himself and others a sum of money, when no sueh circumstanee did or ever had existed. Your petitioner deelares, that this Mr Solomon van Briemen was one of the owners of a Russian ship called the Sojus, that was wrecked the preceding autumn in the White Sea; and that he committed this perjury with a view to obtain an irregular insurance out of Lloyd's Coffeehouse on the said vessel, on the supposition that your petitioner had communicated the circumstance attending her loss at Lloyd's, which he had never done; of the truth whereof all parties were afterwards convineed, by the result of inquiries from London.

" Had the supposition regarding your petitioner proved true, this masked detention was intended to be dropped, and he was to have been prosecuted for the amount of the insurance on the Sojus, which the underwriters at Lloyd's refused to pay. It so happened, that a Mr Popoff, another of the owners of the Sojus, was Mayor at the time, and, by virtue of office, President of the Magistracy: in this way the Magistrates took cognizance of so extraordinary a proceeding. So unhappily circumstanced, your petitioner wrote the particulars to Sir S. Shairpe, as also to Lord G. L. Gower, his Majesty's Consul and Ambassador at St Petersburg, praying their interferenee to obtain an order for him to proceed on his journey without further molestation. To whieh application Sir S. Shairpe replied, " He had by that post written to the Governor-General of Archangel, desiring your petitioner might be immediately liberated, if not legally detained." Some weeks passed on, without any thing being done. Your petitioner applied again to both the Consul and Ambassador; to which application Sir S. Shairpe answered, " That the Governor-General had replied to his letter, stating your petitioner to have behaved very indecorously, and that he was legally detained;" when the faet is, he was patronizing Mr Van Briemen in the proceeding before stated. Lord Gower also replied to your petitioner's application, saying, " That in eonsequence of what the Governor-General had written to Sir S. Shairpe, he was precluded from making application in his behalf; but if your petitioner could bring for-

ward any proofs of irregularity in the business, he would then act as the case might require."

"The proceedings were of so impure a nature, and of such public notoriety, that the Procurer of Archangel, immediately after this correspondence, reported to the Minister of Justice at St Petersburg, "That your petitioner was extremely ill-used, and that he was illegally detained." It appeared afterwards, that Sir S. Shairpe read the report at Prince Lapuchin's, the Minister of Justice, on its arrival at St Petersburg, but of which report no notice was ever taken; and although your petitioner made subsequent and frequent applications to the Consul and Ambassador, yet not the smallest answer was ever returned to his entreaties. The Procurer also forwarded a copy of his report to Prince Lapuchin, but with no better success.

"After a durance of six months, your petitioner was liberated, when he proceeded to St Petersburg, with every requisite voucher of the Governor-General's letter, and of the ill-treatment he had sustained.

"Your petitioner, on his arrival at St Petersburg, found it necessary, in behalf of his injured reputation, to impeach General Furster, the Military Governor of Archangel, to Count Kotzebue, the Minister of Justice, on three counts, to-wit,

"1. For having sanctioned Mr Solomon Van Briemen in an improper oath, knowing it to be so.

"2. For having written an untrue account of the affair to Sir Stephen Shairpe, his Majesty's Consul, for the purpose of preventing justice.

"3. For causing him to be thrown into a loathsome military prison, for the purpose of extorting from him a sum of money, with a view to colour the transaction, and thereby pave the way to a justification of his own conduct and that of others.

"Count Kotzebue had the matter investigated through the Chief Government Court at Archangel; and, finding every allegation to be correct, he furnished your petitioner with a document, to be carried into the Senate, together with his complaint and vouchers, for the purpose of obtaining an indemnification for his sufferings, according to law.

"The affair afterwards went into the Senate, through Lord Gower, by virtue of an Imperial ukase.

"That although your petitioner's case was irrefutable, yet the Senate, instead of answering to your petitioner's complaints, or redressing his grievances, patronized the proceedings, and had your petitioner arrested and imprisoned, on various erroneous allegations; of the erroneousness of which, their own courts were afterwards obliged to furnish official testimonies. After having tortured your petitioner for a series of years,

sometimes by closely confining him in a wretched loathsome prison; at others condemned to a dungeon, to be kept on bread and water; often publicly marched through the city with gangs of felons, and criminals of the worst description, and even then by the house of his Majesty's resident. At best, he was never suffered to go out but like a person under serious criminal arrest, and was the object of attention, not only of all the Foreign Ministers resident at the Court, but of the public at large, to the great disparagement of his Majesty's Crown, and the heart-rending humiliation of himself.

"Through the whole course of these proceedings, your petitioner made innumerable applications to the Consul and Ambassador for an appeal to the Emperor on such a national disgrace, and was not only uniformly rejected, but the Consul went so far as to assert the proceedings to be right.

"Thus, without having offended any law, either civil or criminal, and without having injured any individual, in this manner was your petitioner bandied from one prison to another, through the various ministrations of Lord G. Gower, Mr Stewart, the Marquis of Douglas, and Lord G. L. Gower's second embassy, and two years subsequent thereto.

"That, during this period, a dispute happened betwixt a Captain Gardener of Hull and the Captain of the Guard-ship, on a squabble of only two roubles for pilotage, which trifling affair was carried to the Emperor no less than four times by his Majesty's Minister within the space of two months, while your petitioner's case was sedulously suppressed, although the honour of both countries was materially concerned in the issue.

"That, previous to Lord Gower quitting St Petersburg the last time, your petitioner waited upon his Lordship, and also upon Sir S. Shairpe, urging the nationality of the case, and praying for an appeal to the Emperor, as both law and justice required, when your petitioner was, for the last time, positively denied, through Mr Rick, his Lordship's secretary, who said his Lordship could not do it. Thus both the Consul and Ambassador left St Petersburg, leaving your petitioner the object of persecution, without any aid whatsoever. At length, the Senate, being tired of its proceedings, your petitioner was furnished with a pass to quit Russia, in October 1809; which act was a declared judgment in your petitioner's favour, and a proof that the Senate must have revoked its own ukase.

"That on your petitioner's return to England, he made a representation of his case to Marquis Wellesley, furnishing the original Russian ukases, and other vouchers, confirming the truth of every allegation here stated, praying redress.

"That your petitioner's case and documents were investi-

gated by his Majesty's Most Honourable Privy Council, and found to be perfectly correct.

" That in consequence of the peculiar and overwhelming hardships of the case, combined with its nationality, your petitioner was induced to apply to the Lords of his Majesty's Treasury for relief, which relief their Lordships were unable to grant.

" That your petitioner, by this long-continued series of cruelty and oppression, has not only had his health and reputation materially injured, with the loss of his business, but his whole property has been absorbed in supporting the expences, and making good the consequences of the proceedings, leaving him at present considerably involved.

" That your petitioner pledges himself to prove, at the bar of your Honourable House, the facts stated in this his humble petition, if he shall be permitted so to do.

" Your petitioner humbly conceives, that having undergone such a series of persecutions, solely on acçount of his having applied for redress for the injury sustained by the letter of General Furster, the Governor-General of Archangel, to Sir Stephen Shairpe, herein before stated, he presumes it renders the affair of national import, as such; and that the Consul and Ambassador having neglected and declined interfering in his behalf with the Emperor, which your petitioner is of opinion they ought to have done;—your petitioner therefore humbly thinks, that, in justice, he is entitled to satisfaction for the damage he has sustained, from the Government of this country.

" Your petitioner, therefore, most humbly prays your Honourable House to take into its consideration your petitioner's case, and recompense your petitioner for the losses he has actually sustained, in consequence of the circumstances herein before stated, with a compensation for his personal sufferings, as your Honourable House may judge right and proper; and your petitioner will ever pray, &c. &c.

" JOHN BELLINGHAM."

" *London, 28th Feb.* 1812."

(Copy, No. 1.)

" SIR, *Whitehall, Feb.* 18. 1812.

" I am directed by Mr Secretary Ryder to acquaint you, That your petition to His Royal Highness the Prince Regent has been referred, by the command of His Royal Highness, for the consideration of His Majesty's Most Honourable Privy Council. I am, Sir, your most obedient, humble servant,

" J. BECKETT."

" John Bellingham, Esq."

(Copy, No. 2.)

" SIR, *Whitehall, March* 9. 1812.

" I am directed by Mr Secretary Ryder to acquaint you, That your petition to His Royal Highness the Prince Regent, praying that he would be pleased to order your Memorial, therein enclosed, addressed to the House of Commons, to be brought before Parliament, has been laid before His Royal Highness, and that he was not pleased to signify any command thereupon. Your Memorial to the House of Commons is accordingly herewith returned. I am, Sir, your most obedient humble servant,

" J. BECKETT."

" John Bellingham, Esq."

Finding that the preceding papers had not their desired effect, he next made the following application to the Magistrates of Bow Street:

" To their Worships the POLICE MAGISTRATES of the Public Office in Bow Street;

" SIRS,

" I much regret its being my lot to have to apply to your Worships, under most peculiar and novel circumstances. For the particulars of the case, I refer to the enclosed letter from Mr Secretary Ryder, the notification from Mr Perceval, and my petition to Parliament, together with the printed papers herewith. The affair requires no further remark, than that I consider his Majesty's Government as having completely closed the door of justice, in declining to have, or even to permit, my grievances to be brought before Parliament for redress, which privilege is the birth-right of every individual.

" The purport of the present is, therefore, once more to solicit his Majesty's Ministers, through your medium, to let what is right and proper be done in my instance, which is all I require. Should this reasonable request be finally denied, I shall then feel justified in executing justice myself; in which case, I shall be ready to argue the merits of so reluctant a measure with his Majesty's Attorney-General, wherever and whenever I may be called on to do so. In the hopes of averting so abhorrent but compulsive an alternative, I have the honour to be, Sirs, your very humble and obedient servant,

" JOHN BELLINGHAM."

" 9. New Millman Street,
March 23. 1812."

On calling for an answer to the preceding, he was informed, in a note, that "the Magistrates could not interfere." His last application to Government was made on the morning of Monday May 11.; and an answer was prepared for the signature of the Secretary of State, again informing him that his demand could not be acceded to.

Furnished with such an account of his conduct, a phrenologist of little experience might predicate the form of Bellingham's head. But, without attending to Phrenology at present, let us observe, that the first thing to be noticed in this account is, that Bellingham was a man of violent temper, infatuated imagination, and perverted judgment. In other words, that his passions were very strong, and his intellect very weak,—a combination the most unfortunate that a human being can possess. It is well known to be difficult to restrain violent passions, even when the intellect is powerful; and, therefore, when it is very weak, there can be scarcely any restraint at all exercised. When a man's understanding is so feeble as not to admit of his discovering so clear a matter of business, as the liability of Bellingham to the merchants from whom he received orders, and whose ships were engaged, he must approach very nearly to the verge of idiotism. Bellingham, considering his arrest, in consequence of the failure of his contract, as an act of injustice, clearly indicated the inability to distinguish justice from injustice, which is the same thing as being unable to know right from wrong. His speculations appear to have been not only extensive, but complicated, visionary, and inconsiderate. He laboured under an impression, that nothing which he did could be wrong. His injuries are characterized as ideal; and the perversion of his judgment, or rather his want of judgment, led him to imagine that his were national concerns. His whole proceedings are said to have been turbulent and ungovernable; and he pur-

sued his unreasonable objects with indefatigable perseverance. Such being the character of the man, it is not a matter of wonder that he was put under restraint in Russia, as he must have been taken for a madman. His applications to the Government at home, to the members of the House of Commons, and to the Police Magistrates, clearly indicate, if not a disordered, a very weak intellect, and a violent temper, the more to be dreaded on account of the poverty of understanding. A good memory for facts and language it is probable he possessed, as there appears considerable method in his madness. The address to the Police Magistrates, besides shewing that there was a total want of reflection in applying to such a quarter for redress, betrays the insanity of the man's mind, in the clear and express declaration of his intention to commit murder, if what he demanded were not granted to him. What had become of the sagacity of the magistrates, when this application was made to them, one is at a loss to conceive. They ought instantly to have set a watch on Bellingham, or sent him to a mad-house. His satisfaction with his own conduct, and disappointment at not finding others ready to coincide with him in opinion, seem to have rendered his feeble intellect literally insane, when he could contemplate, first a deliberate murder, and then a public trial, and a disputation with, and a triumph over, the Attorney-General. If ever there was a case of what may perhaps be usefully termed Idiotic Insanity, this was one. Let us now consider how this poor wretch was treated.

The first hardship which the law inflicted, was a refusal by the court to allow counsel to the prisoner, before he should plead, guilty or not guilty. If a criminal have no right to counsel till he has pleaded, and if he be incapable of pleading, the law should be reformed. Mr Alley moved that the trial should be put off, in order to give

time for the production of evidence that the prisoner was insane. Affidavits were produced as to the insanity, and it was evident that it had been impossible, owing to the shortness of the time allowed before the trial, to procure a greater number, or a sufficient number of witnesses. The Attorney-General contended that this was a mere contrivance to impose upon the court. He alleged that Bellingham had been in town four months transacting business, and affirmed that he had exhibited proofs not only of a sound but of a masculine mind. This shews the probability, that the Attorney-General had attended but little to the prisoner's history, and to the nature of insanity. Although he had not seen any thing about Bellingham that indicated derangement, he seems not to have known that it might be possible to traverse Bedlam, without meeting with a single individual, whom, from his own passing observation, he could pronounce insane. It was nothing to say that the affidavits produced did not prove insanity at the *moment* the crime was committed. If this be necessary to be proved, no one could, conscientiously, make an affidavit, such as was required by the court in this case. Even those present could not tell the state of a man's mind at the very moment he committed a crime; and those who could swear that he was a maniac an hour before, could not know that the crime had or had not been committed during a lucid interval, however short. A man may be insane at one time, but apparently of sound mind at another. But who can tell the moment at which a paroxysm may come on? Or, whether, at the moment of any act, the individual be sane or mad? The question of insanity ought always to be considered as a very delicate, and a very difficult one. That Bellingham had been insane at any time, was enough to have justified the delay of a week or two, which could be of no importance. But there seemed, and it was not very unnatural, to be a greater thirst

for vengeance than for justice. In his opening speech, the Attorney-General described the various transactions in which the prisoner had been engaged, and which, to any unprejudiced person, must appear to have originated in a very weak mind. The idea he entertained that he had a just claim on Government, was that of a fool or insane person. His avowed determination to murder some one or more members of the Government, was a proof of insanity; for no man of sound mind could imagine the members of the Government, either collectively, or individually, responsible in such a case. The place he chose for the perpetration of the deed would not have been chosen by any person of sound intellect, who might have resolved to commit such an atrocity. Bellingham had resolved not only to commit the crime, but to do it so publicly that he might be taken and brought to trial, in order that he might have his wrongs made known and redressed, and, as he madly imagined, that he might obtain a triumph over the Attorney-General. Nothing could shew insanity in a clearer light than this. The Attorney-General stated the law of the case with respect to the cognizance of right and wrong. Now, it had been found impossible to convince Bellingham that he was wrong. Every one else saw and believed that he was wrong. When a man cannot see that which all other men clearly see, it is impossible not to infer that that man is utterly unable to perceive the distinction between right and wrong. Bellingham was, for a long time, impressed with the notion, that it was necessary for him to take the law into his own hands, and to punish the members of his Majesty's Government for their not being able to perceive that he was in the right. Such an impression resting on a man's mind proves him to be insane. The Attorney-General cited the cases of Arnold and Lord Ferrars, neither of which cases shewed much humanity in the judges or juries. If the law requires the

state of mind at the moment of action to be proved, it requires an impossibility. It was well for the brother of Sir Archibald Gordon Kinloch, that he was tried by Scottish judges and a Scottish jury. Had that case been tried in the manner of Bellingham's, the end would have been the same. The conclusion of the prosecutor's speech contained an argument of rather an extraordinary kind. He said, "That if even insanity, in all his other acts, had been ma- "nifest, yet the systematic correctness with which the pri- "soner contrived the murder of Mr Perceval, shewed "that he possessed a mind, at the time, capable of distin- "guishing right from wrong." The conclusion to be drawn from this argument might surely be as well the reverse of that deduced by the Attorney-General. If a man bestow much pains in preparing for any action, that preparation cannot be a proof that he knows and believes the action prepared for to be wrong. It may prove as well, that the action is firmly believed to be right; and the more deliberate the preparation, the more firm we may suppose the belief to be. It is true that a man, knowing an action to be wrong, may prepare very deliberately to perform it; but, in such a case, there is commonly much caution and concealment, and a plan for escaping detection is laid. In Bellingham's case, every accessary proof was present, that he firmly and devoutly believed that what he was about to do was justifiable and right. He uttered a threat,—he avowed his determination,—he chose a public place to do the deed,—and, after he did it, he sat down by the fire, avowed himself to be the man who had fired the pistol, and appeared pleased and satisfied that he had accomplished his purpose, and that he should have an opportunity of being justified by a jury of his countrymen. In his defence, he said that the last answer he had received from Government

had given him a carte-blanche to commit the crime with which he stood charged. All this indicated insanity, or idiotism. While under sentence of death he professed repentance for all his sins; but would not, notwithstanding the most earnest and pressing solicitations, acknowledge that his having deprived Mr Perceval of life was a wrong action. At intervals, he offered up devout ejaculations and extemporaneous prayers, with great fervency, ease, and coherence; so much so, that Dr Ford, the ordinary, in the course of his attendance, was astonished that a man, who appeared to have the principles of religion so deeply impressed upon his mind, should be so hardened and impenitent as to appear *unconscious* that the deliberate murder of a fellow creature was a crime in the sight of both God and man. There cannot be a doubt, then, that this unfortunate being could not be convinced that what he had done was wrong,—that he firmly believed and felt that it was right. As little can it be doubted, that he was incapable of distinguishing right from wrong, in the matter for which he was tried. The judge styled Bellingham's mode of reasoning, in his defence, a dreadful one; and truly it was so: but, being dreadful, it surely could not properly be denominated the reasoning of a man of sane mind*.

On the whole, it seems extremely probable, that Bellingham was actually insane, according to the common acceptation of the term; that is, his sufferings arising out of his own imprudence, operating on a violent temper and a very weak intellect, had produced insanity. But setting aside the ordinary idea of insanity, his case appears to be one that probably was never at any previous time before a court

* I am not disposed to dispute the principle, that, when idiots and madmen become mischievous, they should suffer for the crimes they commit, when the safety of society is considered.

of justice. It is one most interesting to the phrenologist; inasmuch, as it is one in which the effects of want of intellect and feeling are displayed, while the animal propensities are in an evidently large proportion. Bellingham's skull is preserved in St Bartholomew's Hospital in London; and it is worthy of remark, that when Dr SPURZHEIM was looking over the skulls collected in that hospital, he said, on taking up that of Bellingham, without knowing whose it was, that it must be the skull of a murderer.

At the first glance, the head strikes us as being remarkably small; and the diminutive size is quite apparent, when it is placed by the side of another. By far the greatest proportion of brain lies backward and laterally, the forehead very low and narrow. Any phrenologist, from what has been stated, might describe the proportions of the different organs, without having seen the skull. They are as follows:

1. Amativeness,—full.
2. Philoprogenitiveness,—full.
3. Concentrativeness,—full.
4. Adhesiveness,—full.
5. Combativeness,—very large.
6. Destructiveness,—very large.
7. Constructiveness,—full.
8. Acquisitiveness,—large.
9. Secretiveness,—full.
10. Self-esteem,—large.
11. Love of Approbation,—full.
12. Cautiousness,—moderate.
13. Benevolence,—very small.
14. Veneration,—moderate.
15. Hope,—full.
16. Ideality.—small
17. Conscientiousness,—small.
18. Firmness,—large.
19. Individuality, upper,—small. lower,—large.
20. Form,—moderate.
21. Size,—moderate.
23. Colouring,—small.
24. Locality,—very large.
25. Order,—small.
26. Time,—moderate.
27. Number,—moderate.
28. Tune,—full.
29. Language,—probably large; cannot be decided easily on a skull.
30. Comparison, } small.—Forehead
31. Causality, } slopes rapidly.
32. Wit,—small.
33. Imitation,—moderate.

The Measurement is as follows:	Inches.
From Occipital spine to Lower Individuality,	7
Concentrativeness to Comparison,	$6\frac{6}{8}$
Ear to occipital spine,	$3\frac{6}{8}$
Ditto to centre of Philoprogenitiveness,	$4\frac{5}{8}$
Ditto to Lower Individuality,	$4\frac{1}{2}$
Ditto to Firmness,	5
Ditto to Benevolence,	$4\frac{6}{8}$
Destructiveness to Destructiveness,	$5\frac{5}{8}$
Cautiousness to Cautiousness,	$5\frac{3}{8}$
Ideality to Ideality,	$4\frac{2}{8}$

Probably there never was a development and character more truly coincident than those of Bellingham. The weakness of his understanding is indicated, both by the smallness of the whole head, and by the small proportion of the forehead. It is obvious that his ideas of his own importance were high; while his *love of approbation* must have rendered him more alive to disappointment. His *acquisitiveness*, want of *benevolence*, and *self-esteem*, must have concentrated his whole thoughts in self. His *cautiousness* being moderate, he had little prudential feeling. His great courage and *firmness* led to his persevering and harassing complaints, which he could not, from want of intellect, perceive to be unreasonable; and his full organ of *hope*, indicates a strong excitement to perseverance. The very little *conscientiousnèss* he had, was confined entirely to his own case, and perverted. His very large organ of *destructiveness*, besides indicating a violent temper, and a disregard to the feelings of others, inspired him with an impatient activity, and led him to resolve on the horrid deed which he committed. Whatever pity he might have expressed for the family of his victim, his pretensions to that feeling are flatly contradicted, by the pains he took to state that he did not repent of what he had done, as

well as by the smallness of the organ of *benevolence*. On the whole, a case more favourable for Phrenology can scarcely be imagined; and it is one, too, equally favourable for demonstrating how erroneous the law is with respect to responsibility. To say with the Attorney-General in this case, that a man deficient in understanding, is, nevertheless, capable of distinguishing right from wrong, would be to say too much, without defining the limit between sanity and insanity, and which, probably, is not to be discovered. A man without much intellect, may indeed possess, according to Phrenology, that feeling which prompts just actions, and gives an aversion to the commission of such as are unjust. But setting phrenological knowledge aside, the opinion of the Attorney-General must be understood as tantamount to the assertion, that idiots are responsible for their actions; idiots being no other than human beings deficient in understanding. But the case of the wretch Bellingham was more deplorable than that of an idiot; for, with a very deficient understanding, he had opposed to it all the lower propensities of human nature, in a high degree of activity. The difficulty, and it is one of great magnitude, which lies in the way of criminal legislation, and of the exercise of mercy in cases such as that we have been considering, is to ascertain where, in the descending scale of intellect, responsibility ends. Until the truth of Phrenology be universally assented to, there can be no hope of the removal of this difficulty; nor will due effect be given to the establishment of houses of refuge, penitentiaries, and the like. But whenever the world shall have shaken off prejudice, whenever it shall condescend to put Phrenology to those tests that have been freely offered by its advocates, then we may expect to see the exertions of the benevolent crowned with success; the reformation of criminals judiciously attempted, punishment properly regulated, and mercy extended with-

out fear of abuse. The Society to which I have addressed these desultory remarks, has been held up to ridicule, which it properly contemns; but I give myself leave to hope, that I may yet live to see it not only treated with high respect, but looked up to as the source of instruction by those who are at present least disposed to acknowledge its authority. Exertion, I trust, will not be wanting; and I expect the members not only to be active in the defence of their own opinions, but boldly and resolutely to try the existing systems of philosophy on their own merits, and to contrast them with Phrenology. It cannot be said of any of us, when we attack a favourite system, that we have nothing to substitute in its place. The foundation of the great work has been laid; and we are bound to shew to the world, that we are able to raise up the edifice we have promised, and to shew, that those who consider our promises vain, are incapable of appreciating the means in our power.

4.—*Observations on the Cerebral Development, and Dispositions and Talents, of Mary Macinnes.*

By Mr George Combe.

(Read 1st May 1823.)

According to the most authentic account, this unfortunate woman was the daughter of Archibald Macinnes, sometime lime-burner in Isla, where she was born, and Flora Macdonald, also a Hebridian. She represented herself as being the daughter of Quarter-Master, now Adju-

tant Mackinnon, of the Regiment; but it is perfectly ascertained that this was a misrepresentation.

About the year 1812 she established a brothel in Edinburgh. On 8th February 1823, William Howat, Henry Ker, Alexander Welsh, James Johnstone, Walter Grieve, and John Wilkinson, after having dined in Howat's lodgings, and after having drank largely, proceeded to her house. After drinking half-a-mutchkin of toddy (*anglicè* punch) there, in doing which they were assisted by two or three girls, their bill was paid, and they moved to go away. The girls said it was a shame to come in for one jug, and that they could not leave the house without having one a-piece, and resisted their going out. A scuffle ensued in the kitchen and passage, betwixt the party wishing to get away, and the women endeavouring to prevent them. During its continuance, Mary Macinnes, who had been abroad, came into the house. Henry Ker depones, "That when she "came into the kitchen, she exclaimed, Stand back, let "me get a knife, and I will soon settle the b——rs. She "did not seem in a great rage, but went deliberately for- "ward. There was nothing going on in the kitchen at "the time pannel came in; heard no particular disturb- "ance in the house at the time. Pannel went deliberately "to the dresser-table, at the back of the door, put both "her hands into a knife-case, and took one out. Heard "knives rattling in the box. It was a kind of open tray "or box. She appeared to him, from her motions in the "box, to be selecting a knife. She had met with no ob- "struction on her way to the dresser. Is convinced there "was not a word spoken to her at that time. Saw a wo- "man at the kitchen-door when pannel entered, who also "came in, (it was Jane Lundie). Pannel took the knife "and darted forward,—saw the knife in her hand at the "time,—seemed a common table-knife, and appeared worn

" away with sharping. Saw a man at the kitchen-door " while pannel had the knife in her hand; understands it " was Samuel Hodge. Pannel sprang forward towards " witness, who parried her hand with his arm, and she was " instantly seized by several women; Lundie, and, he " thinks, Macdonald, were two of them. Witness, had " he not parried, would have received the blow: stept to " one side, and pannel passed him from the violence of her " blow. The women came forward to meet pannel, and " seized her by the clothes. None of witness's party of- " fered the least violence to pannel at this time. She was " restrained entirely by the women; the whole was the " work of a moment."

Mr Ker afterwards went to the lobby, " where he re- " mained a second or two, and returned towards the kitchen, " where he saw Mr Howat standing with his face towards " the door. His right arm was stretched out, and bent to- " wards Macdonald, who, with Macinnes, were in front of " him. His fist was clenched. He might have been striking, " but witness did not see him, nor any thing that could lead " him to think he was doing so. Witness's impression was, " that Howat was keeping the women at bay, defending " himself. Macdonald had not any thing in her hand. Did " not appear to be pushing upon deceased. Pannel was " standing in front of Howat with the knife in her hand— " seemed to be the same knife she had before, but it was now " in her right hand—it was in her left before. Did not hear " Mr Howat speaking, nor any of the women. Saw the " pannel strike a blow with the knife at Howat, and witness " immediately sprang forward, seized her by the back of the " neck, and knocked her feet from her, and she fell on her " back on the floor. The blow was so sudden, that he could " not see what part of the body it struck; but it was about " the upper part of it. It was a sweeping back-stroke of the

" right hand, and appeared to strike his left side. It ap-
" peared a sudden and violent blow. Witness sprang right
" forward to his friend Mr Howat, who was in the farthest
" corner of the kitchen. Pannel and Macdonald were out-
" side of him. Deceased appeared very pale, and looked
" up into witness's face, saying, ' Henry, she has given
" ' me an wound.' Dropped him gently into a chair,
" where he fainted."

He was carried to the Royal Infirmary, where, after lingering till the 20th of February, he died. He had, however, previously emitted a declaration, corresponding, in general terms, with the evidence of Ker, and identified Mary Macinnes as the individual who inflicted the wound.

Mary Macinnes was brought to trial before the High Court of Justiciary, at Edinburgh, on Friday, 14th March 1823. The preceding narrative contains a general statement of the evidence against her. Several witnesses were examined, upon her part, to shew that Ker was so much intoxicated at the time of the occurrence, that his testimony could not be relied on, and that a great tumult and disturbance had been excited by the deceased, and his party, in her house; that she entered in the midst of it, naturally influenced with resentment, and that she was maltreated on entering. Mr JEFFREY, her counsel, pleaded, that, " if the " Jury did not think the act of the pannel altogether justi-
" fied, there was still another question for them, viz. whether
" or not the circumstances of the case would not go so far
" to palliate the offence, as to authorize them at least to bring
" in a verdict of culpable homicide." The Lord Justice-Clerk summed up the evidence, and stated, that more credit ought to be attached to the evidence of the men than to the testimony of the women, in those cases in which the two came into collision; and that there was nothing in the circumstances that rendered the act justifiable.

The Jury, after retiring for twenty minutes, returned a verdict, " Finding the pannel, by a plurality of voices, " guilty of the crime of murder ; but they also recom- " mended her, by a majority, to mercy."

The unfortunate criminal was sentenced to be executed at Edinburgh, on the 16th of April, and her body thereafter to be given to Dr Alexander Monro, for dissection. She had fainted when the verdict was returned; and, after receiving the awful sentence, she fainted again ; and, when the Court dismissed, was lying extended, apparently lifeless, on the seat.

The execution took place upon the day appointed. She conducted herself with astonishing fortitude during the awful ceremony, and died protesting her innocence of the murder. She admitted, however, to the Reverend Mr Thomson and others, that she considered herself equally guilty as if she had inflicted the blow, but always denied having struck it. On the evening of the execution, Mr Joseph obtained a cast of her head, and obligingly laid it before the Society at last meeting. Dr Monro, on the application of the Society, was so kind as to permit a cast to be taken also by Mr O'Neil. The hair was shaven off before taking the casts; and both of them seem to be very accurately executed, (Plate II. Fig. 1.) The development of the different organs appears to be the following:

1. Amativeness,—very large.
2. Philoprogenitiveness,—large.
3. Concentrativeness,—full,
4. Adhesiveness,—large.
5. Combativeness,—enormously large.
6. Destructiveness—large.
7. Constructiveness,—rather large.
8. Acquisitiveness,—rather large.
9. Secretiveness,—large.
10. Self-esteem,—rather large.
11. Love of Approbation,—large.
12. Cautiousness,—rather full.
13. Benevolence,—full.
14. Veneration,—full.
15. Hope,—full.
16. Ideality,—small.
17. Conscientiousness,—rather small.
18. Firmness,—rather large.

19. Individuality,—higher, } full.
19. Ditto,— lower, }
20. Form,—moderate.
21. Size,—moderate.
22. Unascertained.
23. Colouring,—rather full.
24. Locality,—ditto.
25. Order,—ditto.
26. Time,—ditto.
27. Number,—rather full.
28. Tune,—full.
29. Language,—full.
30. Comparison,—moderate.
31. Causality,—small.
32. Wit,—small.
33. Imitation,—rather small.
Wonder,—small.

Measurement.

From Philoprogenitiveness to Lower Individuality,	$7\frac{7}{8}$
Meatus auditorius to Lower Individuality,	$4\frac{7}{8}$
Do. to middle of external surf. of Philoprogenitiveness,	5
Ditto to Firmness,	6
Destructiveness to Destructiveness,	6
Cautiousness to Cautiousness,	$5\frac{3}{8}$
Ideality to Ideality,	$4\frac{3}{8}$
Meatus to Benevolence,	$5\frac{3}{8}$
Constructiveness to Constructiveness,	$5\frac{3}{8}$

The organs of the lower propensities are here very largely developed, while those of the intellect and moral sentiments are proportionally deficient. Her education was very limited. She could read in some degree, and she attempted also to write; but her penmanship was very imperfect. Her *love of approbation* was so strong, that she pretended to those attainments in a higher degree than she really possessed them. The organ of the amative propensity is very large for a female. It is combined with a very large *combativeness*, which gives boldness to the character, and is not proportionally restrained by *conscientiousness*, or the reflecting powers; and this combination sufficiently accounts for the line of life which she adopted, followed up by the commission of the crime for which she suffered.

The organ of *destructiveness* is large, and that of *combativeness* very large, and the deficiency of the restraining

powers has already been observed. In the Outlines of Phrenology, published in 1822, it is stated that *combativeness* "produces courage; and, when very active, recklessness, "and the propensity to attack. It is generally large in per- "sons who have murdered from the impulse of the moment." And *destructiveness* is said to "produce the propensity to "destroy;" and, it is added, "this faculty and *combative-* "*ness*, give the tendency to rage, and bear an analogy to the "malevolent affections of the metaphysicians." It is impossible to doubt, that the murder of Mr Howat was committed on the impulse of the moment. From numerous inquiries also, I have learned that the unfortunate criminal was excessively prone to rage; and indeed she frequently confessed to the Reverend Mr PORTEOUS that she was so. In particular, it is stated, in a Biographical Account of her, lately published,—and the narrative is confirmed by a gentleman who had access to know the fact, and with whom I have conversed upon the subject,—that, on the Monday preceding her execution, she evinced the most violent emotions of rage, on account of not being permitted to see a person to whom she was attached. "She expressed, it is said, a wish to "see a gentleman, whose name we forbear to mention; "and, on being told that he could not be admitted without "an order from the Magistrates, she became inflamed into "a violent fit of rage, and (rising up energetically in her "bed) said, 'I do not know what to make of the Ma- "'gistrates; they have always appeared very kind to me, "'and have asked me if they could do any thing to make "'me comfortable; but the only request I have made to "'them they have refused me. The Great God Al- "'mighty will judge between them and me; and they "'cannot prevent me from going on my knees on the "'scaffold, and telling how I have been used.' She was "permitted by the Magistrates to see that person."

David Haggart, whose case * has already been before the Society, was also a murderer from the impulse of the moment; and you will perceive, that his head and Mary Macinnes's coincide exactly in a very large development of *combativeness*, but that, in other respects, they differ considerably. In Haggart, *destructiveness* is less, and *benevolence* and *intellect* greater than in Mary Macinnes. Now, we have Haggart's own statement in his life, that, where outrage could not serve his purposes, "he was a peaceable "prisoner;" and the Reverend Mr PORTEOUS, who attended him in prison, and the late Mr SIBBALD, Governor of Edinburgh jail, who knew him well, confirmed his statement in this particular. Mary Macinnes, on the other hand, was much more violent, and prone to rage. Mr THOMSON informed me, that on one occasion she had taken offence at some expression in his prayer, and noticed it with evident marks of displeasure at his next visit. He explained to her, and stated that she had wholly misapprehended him, when she apologised. In the phrenological observations on David Haggart, it is observed, that "the effect of the moral senti- "ments in inspiring with contrition for crimes committed "under the impulse of the lower propensities is, to phre- "nologists, the surest test of the degree of strength which "they possess."—"He in whom the propensities decidedly "preponderate, enjoys more internal peace of mind than is "commonly supposed; for it is only where both the higher "and lower feelings possess considerable activity, that their "opposition is strongly felt, and that the individual is con- "scious of powerful contending emotions. The faculty of "*conscientiousness* is opposed to stealing, which implies an "insensibility to the dictates of justice, and the rights of

* See "Phrenological Observations on the Cerebral Development of D. "Haggart, 1821."—W. and C. Tait, Edinburgh; and Longman and Co., London.

" others. *Benevolence* is opposed to *destructiveness*, which, " when powerful, disposes to cruelty."

Any one who reads Haggart's account of his emotions upon hearing of the death of the jailor, will perceive how much, in his calm moments, the influence of the feeling of *benevolence*, in his mind, surpassed that of the propensity of *destructiveness*. I am authorised to state, that Mary Macinnes, on the other hand, at first viewed rather with complacency the death of Howat; and that although she coupled with her denial of having inflicted the wound, an acknowledgment to Mr Thomson that she was as guilty as if she had given it, and although she acknowledged in words the magnitude of her sins; yet she never, on any occasion, exhibited that deep regret of Howat's calamity, or that keen remorse for having, if not inflicted it, at least permitted it to happen, which would have resulted from a powerful and awakened *benevolence*, combined with only an ordinary degree of *destructiveness*. Mr Thomson bears testimony to the superior intelligence as well as softness of Haggart's nature; and has assured me, that he observed the tear starting in Haggart's eye, at the close of his devotional exercises, while no deep impression, or rather no impression at all, seemed to be produced on Macinnes.

The organ of *secretiveness* is also largely developed in the subject of the present observations, and the manifestations of the faculty have been numerous in her conduct. Although it is perfectly certain that her father's name was Macinnes, yet she persisted in maintaining that she was the daughter of Mr Mackinnon, formerly alluded to. Her sister visited her in jail, while under sentence of death, and, in an agony of grief, entreated her to disabuse the public of this monstrous falsehood, and not to die with such a palpable and wicked lie on her lips; but Mary remained unmoved by her entreaties, and maintained her own story. The only indication that she ever gave of departing from

it, was on her way to the scaffold. The Reverend Mr PORTEOUS then asked her, If she still adhered to her declaration respecting her parentage? She paused, made no answer, and changed the discourse to another topic. This, it may be observed, was equal to a confession of the falsehood of her statement; for, while she anxiously reiterated the declarations of her innocence of the murder, it is not probable that she would have failed to support her former statement, if it had been true, by a renewed assertion upon this point also. During her confinement, she preserved the most profound silence regarding the persons who had been connected with her in her previous life. Mr THOMSON, in particular, mentioned, that although he made it a rule never to question persons in such a situation, yet many of them made voluntary declarations; but that he did not recollect of meeting with a criminal who made fewer communications of any kind than Mary Macinnes. Mr PORTEOUS stated, that she endeavoured to envelope every circumstance concerning her in mystery.

It is scarcely necessary to observe, that these unfortunate results arise from the lower propensities, only when they are out of due proportion to, and not regulated by, the superior faculties, both of which unfavourable circumstances are found united in the present case.

To relieve this dark picture, it is proper to notice certain faculties of a more favourable description, which she possessed in a state of considerable development. *Adhesiveness* and *love of approbation* are both large, and *veneration* and *benevolence* are full. It is stated, and from the best information which I have been able to obtain correctly, that she was an affectionate daughter, "affording assist-"ance to her parents, and visiting them from time to time "in Glasgow, where they latterly resided." She also concealed her mode of life from her parents, and corresponded

with them under the name of Mrs Lyon, representing herself as the wife of a person of this name. Her mother visited her in Edinburgh, and believed that she kept an inn; but she was always sent from the house before night-fall; and on no occasion allowed to remain after the ordinary scenes of licentiousness had commenced. These traits of character appear to have proceeded from *adhesiveness* and *veneration*, the two combined producing the feeling of filial piety. It has been stated also, on what is conceived to be good authority, that the unhappy criminal was not destitute of *benevolence* to the poor, but visited the sick in the neighbourhood of her house, and ministered to their relief. As formerly mentioned, the organ of *benevolence* is not deficient, although not developed in any corresponding proportion to the organs of *combativeness* and *destructiveness*. The degree of this sentiment, therefore, which she possessed, joined with the *love of approbation*, probably produced this more amiable feature in her dispositions. Mr Porteous mentioned another instance of a similar kind. A man, residing in the West-Port, called upon him, and mentioned, that his wife had nursed a child to Mary Macinnes; and that he was prompted, by gratitude, to inquire into her situation. She had displayed great affection for her infant, had not only paid his wife punctually the stipulated board, but had defrayed the expense of his entry with two benefit societies; and, in other respects, treated him with much kindness. These instances illustrate the activity of certain of the higher powers; and are perfectly in accordance with the phrenological doctrine of the co-existing energy of the higher with many of the lower feelings of our nature in the same individual, when the organs of both are fully developed.

The organs of *veneration* and *hope* also are both full, although greatly inferior in size to the organs of the animal propensities. Every phrenologist knows, that these senti-

ments, when not directed by understanding, lead to superstition; and it is a curious fact, that Mary Macinnes was excessively sanguine in expectation, and also superstitious. Mr Thomson mentioned, that she entertained a profound belief in dreams, questioned him as to his opinion on the subject, seemed disappointed that it did not coincide with her's, and gave him an instance which had just occurred to herself, of her having dreamt that some communication had been conveyed to her in a paper with three seals, and of the dream being realized in an unknown lady having sent her some extracts from a religious book, in an envelope, secured with three seals:—On another occasion, observing that he had a sore eye, she advised him to get it touched with a gold ring, as an infallible cure, and enforced her advice, by mentioning the case of a Captain ——, to whom she had given a similar counsel some weeks before, and who had followed it with perfect success. The influence of *hope*, unguided by reflection, was conspicuously displayed in her confident, and even superstitious expectations, of experiencing the Royal mercy in very unpromising circumstances. She said, that every event of her life had been borne in upon her mind in dreams, and that this (meaning the execution) was not among her intimations; and she was sure it would not happen. She founded her reliance as much on imagined applications from the ladies of Edinburgh to prevent a woman from being hanged, and on the circumstance of her being the first woman condemned since his Majesty's visit to Edinburgh, as on the recommendation of a majority of the jury, or on the circumstances attending the crime itself; affording, in this instance also, evidence of great deficiency of reflection. In walking to the scaffold, she told Mr Thomson and Mr Porteous, that she had seen all this in a dream, and endeavoured to impress upon them the important communications that might be made in this manner.

It will be observed, also, that the organ of *firmness* is largely developed. Both of the clergymen, above mentioned, stated, that she manifested this faculty in a very extraordinary degree. In walking to execution not a muscle trembled; and, in her conduct on the scaffold, she evinced a degree of fortitude and composure which would have done no discredit to a man of a resolute disposition. *Combativeness* would lend a powerful aid in supporting her in these trying circumstances, as it supplies courage in meeting danger of every description.

Her deficient *conscientiousness* is apparent in her whole conduct, and especially in the multitude of lies which she continued to tell, during the period which elapsed betwixt her condemnation and execution, several of which have been mentioned.

In her head, as in the head of every murderer which the Society possesses, *ideality* is small. This faculty produces the sentiment of the beautiful and excellent, — feelings which are naturally opposed to the lower and more brutal manifestations of the animal propensities.

The organs of the reflecting faculties, *comparison* and *causality*, are decidedly small, in comparison with the other organs of the brain, and below the average of the same organs in females of an equal age. Mr Thomson mentioned, that a corresponding intellectual deficiency was exceedingly perceptible in her mind. He found it impossible to fix her intellect upon any subject, except the incidents of life with which she was familiar. He stated, that, in an interview upon any ordinary topic, she might have appeared as not particularly deficient in understanding; but when he attempted to interest her by reasoning, or to set before her the important doctrines of the Gospel, as an object of intellectual apprehension, he was in a great measure unsuccessful; and, though she always listened to his exhortation with apparent attention, yet she seemed relieved when any thing

occurred to divert the conversation to what was of a less serious and important cast. Mr PORTEOUS also mentioned, that he had found it impossible by reasoning, illustrations or explanation, to impart to her any tolerably distinct apprehension of the scripture doctrines, regarding her own state as a sinner, and the means of salvation. The deficiency, he was satisfied, was natural, and not the mere result of a defective education. She lacked not only information, but the capacity of apprehending it when presented to her, or of retaining it in her mind. Impressions seemed to die from her recollection, almost as soon as the speaker had finished.

Mr PORTEOUS mentioned two anecdotes exceedingly illustrative; the one, of her weak intellectual and moral perceptions; and the other, of the great strength of her natural feeling of attachment. While under sentence of death, but during a period when a petition for mercy had been forwarded and remained unanswered, a gentleman, whose talents Mr PORTEOUS represents as powerful "in awaken-"ing, and interesting, and persuading sinners," spent a considerable time with her in prayer, exhortation, and reading the Scriptures; and Mr PORTEOUS himself immediately followed him, and remained an hour engaged in similar exercises. At his departure, and before he had well left the cell, she said to the guard who was over her, "You see "what an interest these good men take in my soul. They "desire me to look only to JESUS CHRIST for all hopes of "mercy; but it can do no harm to try GEORGE IV. in the "mean time." This, he said, was uttered with an air of vivacity that strongly indicated the slight impression that had been made upon her feelings, as well as her intellect, by their exhortations.

The other circumstance illustrative at once of her weak powers of reflection, her superstition, and her ardent attachment, was the following. It is certain that she had gained the affections of a person in Edinburgh, whose name

need not here be mentioned; and that her attachment to him continued strong in death, and assumed even a romantic appearance in the last moments of her mortal career He had sent her a pocket-handkerchief, having his name written in one corner, and also half an orange, with a desire that she would eat the latter on the scaffold, in token of their mutual affection, he having eaten the other half the preceding morning at the corresponding hour. She held the corner of the napkin in her mouth almost all the night preceding her execution, and even on the scaffold. When seated on the drop, the turnkey gave her the half orange. She took it out of his hand; and, without the least symptom of fear, said, "Tell him (the object of her attachment) "that I die perfectly satisfied that he has done all in his "power for my life, and that I eat the orange as he desired "me. May GOD bless him. Say to him that it is my "dying request that he may take care of drink and bad "company, and be sure never to be late out at night." She seemed to forget eternity in the ardour of her attachment to earth.

I have already adverted to the faculty of the *love of approbation*, which in her was largely developed. That she was alive to the love of dress, and shewed an interest in many other little matters connected with this sentiment, is certified by several persons who observed her habits; but I am inclined to think farther, that to this feeling chiefly is to be attributed the decided denial of her guilt, even on the threshold of eternity. From the strength of this sentiment in her mind, she would probably desire with ardour to relieve both her memory and her friends from the deep stigma which she knew was universally attached to the name of a murderer. When *conscientiousness* is small, *secretiveness* large, and the reflecting faculties very deficient, cunning usurps the place of sense, and this combination occurred in her. She might, therefore, imagine, that a positive denial,

solemnly reiterated with her last breath, would go far to outweigh, in the minds of many, the evidence on which she was condemned, and relieve her memory from the load of infamy under which she saw that otherwise it would rest. That such a feeling might predominate in death, is rendered probable by her development, and the idea is confirmed, by what I have already said of the manifestation of her *adhesiveness* upon the same occasion.

In the preceding narrative, we perceive the unfortunate woman carried away by the various feelings which predominated in her mind. Reflection and the moral sentiments appear to have been so feeble, in proportion to the lower powers, as scarcely to have sufficed to guide her conduct amid the storms of passion, engendered by the propensities; and hence, she lived, without remorse, in the very depths of turpitude and debasement. Still that portion of better feeling which nature had allowed her, seems to have broken forth in occasional gleams, and to have manifested itself withal in its native simplicity, starting at once to its objects, and clinging to them, little modified or directed by ulterior considerations.

It is the fashion to treat such reports as the present with ridicule, and to represent the seeming accordance betwixt the mental manifestations and cerebral development, as the result of some ingenuity, and of much disingenuousness on the part of the phrenologists. I may mention, that, in the present instance, I wrote down the development, such as it has now been stated, before hearing a word concerning the manifestations from either of the clergymen above named; and a member of the Society is now present, who saw a note of it produced to Mr Thomson before he had spoken upon the subject. I have given the authority upon which the foregoing account of the manifestations is founded, and the cast of the head is now presented to you; so that both as to character and development any mistakes of mine may be rectified.

On a former occasion, the Society considered a report on the head of the Reverend Mr M., with a sketch of his natural talents and dispositions *. His character stood nearly in the antipodes to that of Mary Macinnes. He was led, by a strong natural bias, to abandon the trade of a mechanic, and to embrace the profession of a preacher of the Gospel. His mind coincided with the description of an amiable one given by the poet:

> " Some minds are tempered happily, and mixed
> " With such ingredients of good sense and taste
> " Of what is excellent in Man; they thirst
> " With such a zeal to be what they approve,
> " That no restraints can circumscribe them more
> " Than they themselves by choice, for wisdom's sake,
> " Nor can example hurt them: What they see
> " Of vice in others but enhancing more
> " The charms of virtue in their just esteem."
>
> COWPER.

How opposite is the character of Macinnes! On comparing the two heads, you will perceive, that a great mass of the brain in the head of Macinnes lies behind the ear towards the base of the skull; that the forehead is low, and the coronal surface narrow. In the Reverend Mr M., on the other hand, by far the larger portion of the brain is situate before the ear; the forehead possesses a full development, and the coronal surface is highly expanded. You are aware, that the Society possesses casts of nearly thirty murderers; and that in every one of them, without a single exception, a large development of the animal organs, in proportion to those of the intellect and moral sentiments, is found. These casts and skulls of murderers have been collected from Paris, London, Nottingham, York, Dumfries, Glasgow, and Edinburgh; and the same type runs through the whole of them. On the other hand, the Society possesses a variey of casts of the heads of virtuous individuals;

* See page 310. of this Volume.

and, in all of them, an evident preponderance prevails in the development of the moral and intellectual organs, as in the case of the Reverend Mr M. These are facts at which the superficial may smile; but they give pause to the philosopher, and lead him to very serious contemplations.

The observations on the head of David Haggart have also been subjected to much severity of criticism; but I have never met with an individual who ventured upon such a course of remark, after studying philosophically the dispositions of that criminal, and inspecting the cast of his head (Plate II. Fig. 3.), which has long been in the hands of the public, and contrasting it with the development of persons of an opposite natural character. Additional opportunities are afforded by the present case, of trying the accuracy of the observations upon Haggart. The development of his brain coincides with that of Mary Macinnes, in those points in which their dispositions agree, and it varies in those points in which their feelings and talents differ; and both form a striking contrast to the heads of persons of amiable dispositions and elevated talents. The development of Haggart's brain, as it appears from the cast of the skull, is as follows:—(Plate II. Fig. 3.)

1. Amativeness,—moderate.
2. Philoprogenitiveness,—large.
3. Concentrativeness,—large.
4. Adhesiveness,—moderate.
5. Combativeness,—very large.
6. Destructiveness,—full.
7. Constructiveness,—large.
8. Acquisitiveness,—moderate.
9. Secretiveness,—very large.
10. Self-esteem,—ditto.
11. Love of Approbation,—small.
12. Cautiousness,—full.
13. Benevolence,—large.
14. Veneration,—moderate.
15. Hope,—rather small.
16. Ideality,—very small.
17. Conscientiousness,—small.
18. Firmness,—very large.
19. Lower Individuality, —Upper ditto,— } moderate.
20. Form,—full.
21. Size,—moderate.
22. Weight,—unascertained.
23. Colouring,—small.
24. Locality,—large.
25. Order,—full.
26. Time,—moderate.
27. Number,—moderate.
28. Tune,—full.
29. Language,—full.
30. Comparison,—moderate.
31. Causality,—full.
32. Wit,—full.
33. Imitation,—full.

Wonder,—small.

X.—*On the mode of studying the Natural Dispositions and Instincts of the Lower Animals.*

By Mr Andrew Carmichael.

(*Read 8th January* 1821.)

THE information concerning the natural dispositions and instincts of the lower animals is still vague and uncertain, in no ordinary degree. The phrenological mode of philosophising is applicable to many genera of them, as well as to man; for particular parts of their brains have particular functions; and, in the case of the larger animals, much valuable and accurate information may be obtained, by comparing their habits and cerebral development. It was my intention to have set about a synopsis for promoting this object; but my time is so occupied by business, that I am persuaded I shall never make the attempt; but I hope that it will fall into abler hands. My plan was very simple. To form four columns, under the name of the animal. In the first column to insert all the habits, &c. of the animal recorded. In the second, to reduce these to

such of the thirty-three faculties of man as they might most properly be ascribed to. In the third, to state whether the respective organs had been ascertained or not: And to leave the fourth for observations respecting the differences between the male and female, and for pointing out prominences supposed to be organs, the faculties of which had not yet been discovered. Such a synopsis would exhibit at a glance the whole of our information, and all our deficiencies; but, in the present state of our knowledge, the two last columns would be nearly blanks *.

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* The foregoing observations were contained in a letter by Mr Carmichael, read to the Society, and were not intended for publication; but the Committee avail themselves of them, to call the attention of the Members to a very important subject, in which a great deal remains to be accomplished.

XI.—*Phrenological Analysis of some of the Maxims of* La Rochefoucault.

By Mr George Combe.

(*Read* 1*st May* 1823.)

A contributor to the Edinburgh Review, speaking of La Rochefoucault, observes that his "maxims have "done more than almost any other work to give credit to "the unsocial sentiments, in which they who find it more "easy to calumniate than to love their species, and indulge "their wit at the expence of their heart, place their whole "philosophy. La Rochefoucault had lived among the "most licentious portion of his licentious countrymen; and "he generalized what might be partially correct. It can-"not be said that any one of his maxims is absolutely and "universally false, or that any one of them is absolutely "and universally true; and this latitude of opinion is what "makes them dangerous. We have often thought that a "good commentary upon his principal aphorisms, drawn "from a more liberal field of observation, might destroy a

" part of their noxious effects, and reduce them to their " proper value, by pointing out the cases in which they " should be rejected or received." (No. 69.)

Phrenology affords particular facilities for accomplishing the object desired by the Reviewer. It not only introduces to our notice a greater variety of primitive principles in human nature, than are recognised in any previous system of mental philosophy, but it opens up a region of study entirely new in the effects of the combinations of the primitive powers, in different degrees of relative strength. A maxim, for example, which might with great propriety be applied to one individual, in whom *conscientiousness* and *benevolence* were weak, might be totally inapplicable to another, in whom these sentiments were predominantly powerful. A commentary, therefore, pointing out the natural characters in regard to which particular maxims are well founded, and those with respect to which they are erroneous, would reduce them " to their proper " value, by pointing out the cases in which they should " be rejected or received." I differ from the Reviewer, however, when he states, " that it cannot be said that " any one of his maxims is absolutely and universally " false, or that any one of them is absolutely and univer- " sally true." Some of them appear to be indubitably and universally true, and others undoubtedly and unrestrictedly false. I shall therefore take the first twenty-two maxims, as they stand in the original work, and add a commentary to such of them as appear to require it, either in the way of elucidation, or correction; and to those which seem either universally true, or too obvious in their application, to afford room for mistake, no addition shall be made. In rendering the maxims into English, I have in general adopted the language of a translation printed by WHITTING-

HAM, London, in 1802, except in a very few instances in which it appeared susceptible of improvement.

1. What we mistake for virtue is often no more than a concurrence of divers actions and interests, which fortune or industry disposes to advantage. It is not always from the principle of valour and chastity that men are valiant, or that women are chaste.

The same action may proceed from a variety of motives. Genuine charity springs from the sentiment of *benevolence*, guided by *conscientiousness* and *veneration*, but a donation may proceed also from the love of praise. Hence, if fortune places an individual deficient in *benevolence*, but strongly endowed with *love of approbation*, in the society of persons who bestow high encomiums on charitable deeds, it is quite possible, that, to obtain gratification of the latter faculty, he may give alms to the poor,—at least if *acquisitiveness* be moderate in energy. Some individuals in whom the organs of *combativeness*, *secretiveness*, *acquisitiveness*, *firmness*, and *intellect* were large, and *conscientiousness* deficient, have become robbers on the highway to gratify the former powers. Had fortune, however, placed them in Greece or Spain during the wars for liberty, they might, as guerilla leaders, have directed the same faculties against the enemies of their country, and obtained the reputation of heroes. King ROBERT BRUCE might have figured in either sphere. The maxim, therefore, may be correctly applied in individual cases; but these are of rare and not of frequent occurrence, as asserted in the text.

2. Self-love is the greatest of flatterers.

A powerful and ill regulated faculty of *self-esteem*, fills the mind with unbounded sentiments of self-excellence, without reference to merit.

3, Notwithstanding all the discoveries that have been made in the regions of self-love, there still remains much *terra incognita.*

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4. Self-interest is more penetrating than the cleverest of men.

The love of self arises from powerful faculties of *acquisitiveness* and *self-esteem*, and these stimulate the intellect to the greatest possible exertions to minister to their gratification. "*Amour propre*," here translated "self-interest," is frequently rendered "*self-esteem*," or "*self-love*," but the phrenological faculty of *self-esteem*, operating by itself, gives rise to self-satisfaction, rather than self-interest; and requires to be combined with an active *acquisitiveness*, to produce the effects ascribed to "amour propre."

5. The duration of our passions is as little in our power as the duration of our lives.

Passion is the result of the highest degree of energy and activity of the different faculties; thus, a passion for wealth arises from excessive energy and activity of *acquisitiveness*, a passion for fame from the same state of the *love of approbation*; the mind cannot vary the proportions of the organs at pleasure, so as to reverse its own natural constitution, and render that feeling the weakest which nature had implanted the strongest, and hence the passions will *continue to exist* independent of the will; but if intellect and the moral sentiments be largely possessed, the *indulgence of them in actions* may be restrained.

6. Passion often makes a fool of a man of sense; and it sometimes renders a fool clever.

In the one case it overpowers, by excessive excitement, an intellect naturally vigorous; in the other, it furnishes an unwonted stimulus to faculties constitutionally dormant or feeble.

7. Great actions, the lustre of which dazzle us, are represented by politicians as the effects of deep design; whereas they are commonly the effects of caprice and passion. Thus the war between AUGUSTUS and ANTONY, supposed to be owing to their ambition to give a master to the world, arose probably from jealousy.

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8. The passions are the only orators that always persuade. They are, as it were, Nature's art of eloquence, fraught with infallible rules. Simplicity, with the aid of the passions, persuades more than the utmost eloquence without it.

The propensities and sentiments furnish the motives which impel the mind to action: Passion, in the general sense, is the highest degree of their excitement: Eloquence, therefore, without passion, must proceed from intellect alone; and as men rarely act from abstract considerations, independently of feeling, such oratory must of necessity be little calculated to rouse an audience to active enterprise.

9. So much injustice and self-interest enter into the composition of the passions, that it is dangerous to obey their dictates; we ought to be on our guard against them, even when they seem most reasonable.

The passions arise from excessive energy and activity of the different primitive powers; and the ardent desire for gratification attending this state, constitutes their self-interest. Injustice, however, does not enter *necessarily* as an element, into their composition; but their undue preponderance produces a constant tendency towards it. Hence, even the best sentiments, when passionately active, lead to impropriety of conduct. In *Don Quixote*, *benevolence*, *love of approbation*, and *conscientiousness*, assume the character of passions; and lead him, in seeking their gratification, by the redressing of public wrongs, to forget the duties of his private station.

10. In the human heart there is a perpetual generation of passions, so that the destruction of one is almost always followed by the ascendancy of another.

If Nature has bestowed on any individual uncommon energy and activity of a variety of faculties, one of them may break out into excess as frequently as another is restrained, and hence in him there may be found the perpetual generation of passion here spoken of. But if only one faculty is naturally predominant, a single passion may engross the mind, and it being once subdued, no other would usurp its place. In general the miser feels no passion except that of *acquisitiveness*.

11. Passions often beget their opposites; avarice sometimes produces prodigality, and prodigality avarice. Men are often firm through weakness, and bold through fear.

No degree of *acquisitiveness* will ever generate the sentiment of *benevolence*; and no degree of *fear* will become intrinsic *courage*. Hence phrenological principle would lead us to deny that any passion can beget its opposite. Some faculties, however, acting in particular circumstances, may give rise to *actions* that usually spring from opposite sources. Thus, some persons confer favours on the powerful, not from *benevolence*, but under the influence of a far-sighted selfishness, expecting a double return. Opposite faculties may exist in a state of vigour in the same individual, and the energy of one may stimulate another into action, to supply it with the means of gratification. Thus we are told that CATILINE and the Duke of BUCKINGHAM "were as covetous of the property of others as profuse of their own." If *benevolence*, *love of approbation*, and *acquisitiveness* were all strong in their minds, and *conscientiousness* weak (which appears from history to have been the case), they would indulge the first two tendencies without controul from principle, and this would beget profusion. Their wealth being squandered, the very energy of these faculties would stimulate *acquisitiveness* to

vehement action in order to acquire more; and the impulses of this tendency also being followed without controul from *conscientiousness*, rapacity would be the natural result; so that such individuals would be both profuse and rapacious. Excessive fear also, amounting to desperation, may forcibly stimulate a moderate *combativeness*, and produce momentary valour; but in these instances passions only excite their opposites into activity, and do not, in a philosophical sense, produce them.

12. Notwithstanding all the care we take to conceal our passions, under the pretences of religion and honour, they still appear through such flimsy veils.

Every propensity and sentiment has a natural language, manner, and gesture, peculiar to itself. The most perfect actor cannot habitually disguise these, or exhibit only the manner of *veneration* and *justice*.

13. Our self-love bears with less patience the condemnation of our taste than of our opinion.

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14. Men are not only subject to forget benefits and injuries; they even hate those who have obliged them, and cease to hate those who have injured them. The very attention to requite kindnesses, and revenge wrongs, appears to them to be an insupportable slavery.

This maxim holds good as to men who possess a certain combination of faculties, while it is inapplicable to others. If an individual possess great *self-esteem*, and little *conscientiousness* and *benevolence*, it is quite possible that he may hate those who have obliged him; because, while the weight of the obligation would occasion a constant mortification to his *self-esteem*, *conscientiousness* and *benevolence* would be too feeble to produce the sentiment of gratitude. If, on the other hand, *self-esteem* were moderate, and *conscientiousness*, *benevolence*, *veneration* and *adhesiveness*

powerful, the individual would never forget a kindness, and never cease to love his benefactor. Men cease to hate those who have injured them, because disagreeable affections of *self-esteem* and *destructiveness*, which give rise to hate, subside naturally by the influence of time; while the higher sentiments, the sources of better feeling, when sufficiently possessed, are ever ready to resume the sway. Attention to requite kindnesses, and revenge wrongs, is an insupportable slavery, only when the feelings that lead to gratitude or revenge no longer animate the mind.

15. The clemency of Princes is often nothing more than policy, to gain the affections of their subjects.

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16. This clemency, of which we make a virtue, is practised occasionally through vanity, sometimes through indolence, often through fear, and almost always from a mixture of all the three.

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17. The moderation of happy people arises from the calm which good fortune bestows upon the temper.

It arises from a well-balanced endowment of faculties, placed in favourable circumstances. As a general rule, good fortune, or agreeable external circumstances, have a natural tendency to call the higher sentiments, viz. *benevolence*, *ideality*, *hope*, *love of approbation*, and *justice*, into activity; while adverse circumstances repress them; and excite *combativeness*, *destructiveness*, with the animal propensities in general. The crew of the Medusa French frigate, before the wreck, manifested the former sentiments, and were full of gaiety and joy; after it, and amid the privations of the raft, they manifested only the latter faculties, and resembled demons. But there are many individuals, on whom, owing to an unfortunate preponderance of the propensities over the sentiments, good

fortune operates as an excitement to evil. NERO must have been such a one; while there are others in whom the proportions are reversed, and they preserve serenity of temper even in the greatest adversity. Such was JOHN HEPBURN, who accompanied Captain FRANKLIN and Dr RICHARDSON in the Arctic Expedition; and in his head, as I know from examination, the moral and intellectual organs greatly predominate over those of the animal propensities.

18. Moderation is a dread of incurring that envy and contempt merited by those who allow themselves to be intoxicated by prosperity. It is a vain ostentation of the strength of our mind. Moderation in the most exalted situations, is a desire of appearing superior to fortune.

From observations in real life, I know that moderation in conduct springs either from an absence of strong desires, or from a good endowment of *conscientiousness*, *cautiousness*, *firmness* and *reflection*, controlling the impulses of the mind. Moderation in prosperity is attributable chiefly to *conscientiousness*. This sentiment, when vigorous, continually enforces the discharge of every active duty, and opposes all aggressions by word or deed upon others. Hence, a well-regulated course of action is the necessary result of its preponderance in the mind. It feels the force and beauty of the observation,

> Est modus in rebus; sunt certi denique fines,
> Quos ultrà citràque nequit consistere rectum.

The maxims of ROCHEFOUCAULT afford strong presumptive evidence, that while he possessed great *love of approbation*, *secretiveness*, and *self-esteem*, he must have been deficient in *conscientiousness:* and to this defect in his mind, almost all his departures from nature and truth, in his maxims, may be traced. The present maxim affords one striking illustration of this remark. An individual possessing such a combination as I have ascribed to him,

would not feel the imperative call to moderation communicated by *conscientiousness*, while he would be acutely alive to the fear of ridicule and contempt. In his own mind, therefore, the noble author would probably feel no higher motive to moderation than the "dread of incurring that envy and contempt merited by those who allow themselves to be intoxicated by prosperity;" but he erred in founding upon his own feelings, a maxim to be applied to mankind in general. Madame de MAINTENON says, that "he "was an *intriguing*, *supple man*." These qualities indicate *cautiousness* and *secretiveness* powerful, and *conscientiousness* deficient. She adds, "Yet there never was a friend more *open*, more *solid*, or who gave better advice." This bespeaks *adhesiveness*, *benevolence*, and intellect strong; but I would suspect him to have been *open*, only when he had no interest of his own to serve by concealment.

19. The misfortunes of other people we all bear with an heroic constancy.

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20. The constancy of the wise is only the art of keeping their disquietudes within their own minds.

This maxim affords another glance into the constitution of the author's mind. If *secretiveness*, *self-esteem*, and *love of approbation*, were large in him, he might appear constant under small disquietudes merely, by the art of keeping his uneasiness within himself; if, in another individual, however, *firmness* and *conscientiousness* were large, he would be constant through natural constitution and principle.

21. Criminals at their execution sometimes affect a constancy, and contempt of death, which is, in fact, nothing more than the fear of facing it. Their constancy and contempt may be said to be to the mind what the cap is to their eyes.

Natural constancy in the near prospect of death arises from a great endowment of *veneration*, *hope*, *combativeness*, and *firmness*, with a moderate *cautiousness*. With this development death loses half its terrors, and real constancy becomes practicable. If the proportions of these faculties be reversed, and *cautiousness* be large, with *hope*, *combativeness* and *firmness* small, the most abject terrors will be apt to encompass the mind. With the latter development, the fear of death cannot be pushed aside merely as a disagreeable object of contemplation. It seizes on the mind, and overwhelms it. If to large *combativeness*, *hope*, *firmness*, and *secretiveness*, is added an ample endowment of *cautiousness* and *reflection*, death may then be felt, by means of the latter faculties, as truly terrible; while the mind, by the aid of the former, may triumph over it. In such a case, however, the individual could not affect to despise it. The maxim is, therefore, wholly erroneous. Independently of Phrenology, we would be led to conclude that the man who possesses force of character sufficient to shade death from his eyes, in the very act of execution, would enjoy fortitude to face it bravely; while, on the other hand, if a criminal is so constituted as not to feel its terrors, he will contemn it, because, to him, it is really not appalling.

22. Philosophy easily triumphs over past and future ills; but *present* ills triumph over philosophy.

Present ills strongly affect the propensities and sentiments, and excite them to painful activity. Intellect or philosophy may suppress the *manifestation* of the emotions, but cannot make them cease to be felt. Hence such ills triumph over both. Past or future ills feebly excite the propensities and sentiments, and over them philosophy is easily victorious.

XII.—*Observations on* Dr Barclay's *Objections to Phrenology.*

By Mr Andrew Combe.

(Read 3d April 1823.*)*

Dr Barclay, in his valuable work on Life and Organization, comes forward as the opponent of Phrenology, and condemns it as visionary and unfounded. The object of the present paper is, to examine shortly the arguments, for he advances no facts, upon the strength of which he pronounces this unqualified judgment. The phrenologists state, that they have observed certain facts in nature, and drawn certain conclusions from them. In order to refute their statement, an opponent is called upon, by the dictates of sound logic, to follow one of two courses;—either to disprove their alleged facts, by shewing that nature is in opposition to them; or to allow their assertions to be true, and to demonstrate, by argument, that their conclusions do not follow, even from their own premises. Dr Barclay, however, is pleased to follow a course altogether different. He assumes, without inquiry and without evidence, that the facts

have no foundation; and he then proceeds to shew, by argument, that the phrenological conclusions are inconsistent, not with their own premises, but with certain preconceived notions of his own, altogether foreign to the question. The result is, that he fights with a shadow, and the merits of Phrenology remain exactly as he found them. The following observations, therefore, are necessarily limited to pointing out the insufficiency of Dr BARCLAY's method of attack.

His first and principal proposition, upon the strength of which all the others more or less depend, is so very untenable, that I am surprised at his stating it seriously; and if his whole subsequent reasoning had not been founded upon it, I should have passed it over as an unintentional mistake. It is as follows: that "*voluntary organs, or organs formed to obey the will, are not restricted to any specific modes of operation.*" This proposition he illustrates as follows: "The human hand," says he, "is not limited to acts of beneficence, or to acts of cruelty; it is equally subservient to all the instincts, appetites and passions; equally obedient to all who employ it in the different departments of the fine arts, and to all who exercise it in the numerous fatiguing and diversified labours of the mechanic. An organ thus employed, in such a variety of different offices, and executing each with promptness and precision, might naturally lead the unwary to imagine, that it is composed of a great variety of subordinate organs, corresponding in number to the different duties which it has to perform. Such is the conclusion which one would draw in reasoning analogically from the works of art; but such a conclusion certainly would not follow, in reasoning analogically from the works of nature; for although the hand be composed of many dissimilar parts, it is not constructed on the principle of a time-piece, whereof each index, as that for the hour, the minute and the second, requires a distinct and appropriate apparatus. In the human hand all the parts are observed to combine in each operation; and it is certain, that the varieties of its operations are not so much owing to the number of parts as to the varieties of their combinations; the combinations into which they enter being almost incalculable, while the parts themselves are comparatively few, and easily counted. *Taking the hand, then, as a specimen of the works of nature and of animal structure, and thence reasoning on the prin-*

ciples of analogy, with respect to the brain, ought we not to infer, that all the parts, of which it is composed, may also combine in a similar manner, and be concerned in every phenomenon which has been ascribed to it? This inference," he continues, "it is true, is not, and cannot consistently, be the inference of the phrenologists, who, upon the *supposition* that the brain is constructed as *man* would construct it, on the principles of art, *imagine*, that each specific phenomenon, or series of phenomena, is the effect of a specific δυναμις, faculty, or *vita propria;* and that each faculty or *vita propria* has a specific system of organs, by which it perceives, conceives, imagines and remembers, in a manner peculiar to itself." Pages 373-4.

Is it really true, then, that voluntary organs "are not "restricted to any specific *modes* of operation?" If Dr B. means merely, that such organs are not restricted to the performance of any specific *acts*, no one will refuse assent to his proposition; for the same muscles which move the hand to do an act of charity, may move it to commit a homicide, by precisely the same function of contraction. But if his meaning be what his words express, viz. that "vo- "luntary organs are not restricted to specific *modes of ope-* "*ration*," every physiologist must differ from him; for his proposition would then amount to this, that such organs have not received from nature any definite constitution and functions; but that muscles, for example, besides acting by contraction and relaxation, which have hitherto been conceived to be their sole *modes of operation*, may assume any other mode of action, which the will, directed by the fancy, may choose to impress upon them,—a notion too absurd to require any serious refutation.

In the case of the hand, it is obvious, that all its operations are distinctly referable to the single mode or principle of voluntary motion, or muscular contraction; and therefore to maintain the analogy between its acts and those of the mind, the whole operations of the latter ought to be equally referable to one principle,—feeling, or reflection, for instance, but not to two or more. The hand which ampu-

tates a diseased limb performs an act of beneficence; while the hand which would cut off a sound leg would be the instrument of atrocious cruelty; but, in either case, the action of moving the knife is precisely the same, and one set of muscles, acting in one way, is amply sufficient for impelling it in both operations. But, taking the other part of the parallel, will Dr B. himself venture to assert, that the feeling of the mind which impels the knife is in both cases precisely the same; and so completely so, that we are bound, by the mere force of analogy, to infer, that as one set of muscles serve to move the knife in both operations, so both emotions *must* be experienced by means of one and the same mental organ? This length he is bound to go; for he feels so strong in the force of his analogies, that he reckons all direct inquiry into the *fact* superfluous. In this instance, however, the analogy is scarcely in his favour.

I may observe, farther, that there is as great a difference betwixt the feeling of benevolence and that of cruelty, as betwixt a sound and a smell; and as we know, that, in the latter case, Nature has provided different organs for receiving the different kinds of impressions, we are led to infer, that she may have followed the same course in regard to the different internal feelings. Even in the case of the hand, also, the analogy is in favour of this inference, and in opposition to that of Dr B. This organ, besides performing the function of voluntary motion, is also the instrument of touch. If Dr B.'s analogy hold good, both functions should be performed by means of the same corporeal parts, and the power of exercising the one function, should be always in proportion to that of performing the other. Recent experiments, however, have shewn, that voluntary motion is performed by one set of nervous fibres, and that touch is exercised by another, although both are inclosed in a common sheath; and it is also an indisputable

fact, that frequently the most exquisite sensibility of touch co-exists with great deficiency of muscular energy; besides, that the one occasionally remains unimpaired, when the other is entirely destroyed by disease. Hence, reasoning, even from the analogy of the hand, we should be led to conclude, that wherever mental affections are dissimilar, and disproportionate in natural intensity, they will be manifested by different organs.

Dr BARCLAY next proceeds to deny the existence of a plurality of organs in the brain, because, says he, we have no ocular demonstration of their existence; for "on opening the skull, and examining the brain towards the surface, where these organs are *said* to be situated, it seems to require no small share of creative fancy to see any thing more than a number of *almost similar* convolutions, all composed of cineritious and medullary substance, very nearly in the same proportions, and all exhibiting as little difference in their form and structure as the convolutions of the intestine; nay all, when unfolded, according to SPURZHEIM, in cases of hydrocephalus internus, presenting but one uniform web of cineritious and medullary matter. No phrenologist has ever yet observed the supposed lines of distinction between them; and no phrenologist, therefore, has ventured, in the course of his dissections, to divide a hemisphere of the brain accurately into any such number of well marked and specific organs. But, suppose it divided, and each organ or system of organs to be presented to another professed adept in the science, would he venture, were they presented promiscuously, to distinguish, merely by their form and structure, an organ of one propensity from another; an organ of propensity from an organ of sentiment, an organ of sentiment from an organ of knowledge, or an organ of knowledge from an organ of reflection? He would be a hardy phrenologist if he did, as these organs are not distinguishable by any characteristic appearance like the organs of sense.—On seeing an ear, an eye, a nostril, a hand, or a tongue, no anatomist requires to be informed what these are, where they were situated, or how they were connected, to be able to say in what functions it had been employed. Their marked peculiarities speak for themselves. No such differences appear among the organs assigned to the brain."

Admitting, for the sake of argument, that what Dr BAR-

clay here advances is strictly true, yet, it does not, in the slightest degree, impugn the validity of the fact observed by the phrenologists, that a particular power of the mind is always found in connection with, and in proportion to, the size and healthy state of a particular portion of the brain. It therefore ought to have no weight as an objection. If Dr Gall had said, I perceive, in the anterior lobe of the brain, a certain kind of structure, and I *therefore* assign to it the reflecting faculties; in the middle lobe another kind, and I therefore assign to it the sentiments; and in the posterior lobe a third kind, which I conceive is best adapted to the propensities; Dr Barclay's objection, that the form and structure of the whole brain were so exactly similar, that it was impossible by these indications alone to distinguish one part from another, would be insuperable; it would overturn the very basis of the system, and explode the whole doctrines on the subject. But, as already mentioned, Dr Gall did not found on such a basis; for the facts observed by him, and out of which Phrenology arose, were numerous and apparently well established, long before the idea of connecting them by a theory appeared practicable. I might almost say, that even now, in his hands, Phrenology still retains much more the appearance of an interesting collection of observations on the connexion between mind and organisation, than that of a system of the philosophy of mind.

But in reality, Dr Barclay's objection is not altogether borne out by the structure of the brain itself. Dr Spurzheim, in a letter to my brother, containing some remarks on Dr Barclay's book, speaks directly to the point, whether it is possible to distinguish the different organs, an organ of a propensity from an organ of sentiment, or of intellect, &c. "Is it really true," says he, "that it seems to require no small share of creative fancy, to see any thing

more *than a number of almost similar convolutions,* and that the organs are not distinguishable by any characteristic appearance?" "Dr Barclay," continues Dr Spurzheim, "has my esteem as an anatomist in general. His skill as a teacher of anatomy also cannot be called in question, and there is no doubt that he has paid more attention than any other man of science in Edinburgh to comparative anatomy. But as to the structure of the brain, he, like many other anatomists, may be excused for having been less attentive to it. I cannot help blaming him, however, for deciding that such a thing is impossible, merely because he has not examined it with due attention in nature. Phrenologists, in comparing the relations between anatomy and physiology, admit as a fundamental principle, that the anatomy of any part never indicates the nature of its functions. The function of every organic part must be determined by observation, and by observation alone. The only question then is, Whether the individual organs of the mind *are distinguishable by any characteristic appearance,* so as to render it possible to compare them with individual sorts of mental operations. I cannot say what Dr Barclay is able to do; but it is certainly easy to distinguish the anterior, the middle, and the posterior lobes of the human brain from each other; and were they shewn to me separately, I should never take one for the other. In the same way, I should never confound the organ of *amativeness* with that of *philoprogenitiveness;* or *philoprogenitiveness* with that of *secretiveness;* or the organ of the desire to acquire with that of *benevolence* or *veneration;* and Dr Barclay may be sure, that, if he make it a study to compare the configurations of the cerebral convolutions, and of the different organs, he will find great differences, which he has hitherto overlooked. Moreover, when he shall see, besides, the different *forms* of the organs, that they are frequently developed *in different proportions,* that of *benevolence,* for instance, large, when *veneration* is small, or *vice versa,* he will have an additional proof that the brain consists of a congeries of parts performing different mental functions. It will not be denied that frequently some convolutions of the brain are much more developed than others; and in these cases Dr Barclay ought to observe, whether the functions which phrenologists ascribe to the different parts, are not more vigorously performed by the larger than the smaller organs."

To shew that Dr Spurzheim is able to distinguish one organ from another in the brain itself, without the intermedium of the skull,—"an organ of propensity, for example, "from an organ of sentiment, and an organ of sentiment

" from an organ of knowledge,"—I shall shortly state a case in which, without having seen the skull, he pointed out the different degrees of development of the different organs, from an examination of the size and appearance of the brain and its convolutions.

On 1st December 1818, when engaged in the first course which he gave after his return to Paris, a brain was handed in to him during lecture, with a request that he would say what characteristic dispositions it indicated; and he would then be informed to whom it had belonged, and how far he was correct.

Dr SPURZHEIM said, that in such a case two things should always be attended to; 1*st*, That as brains of every size are subject to disease, and many natural imperfections common to them with other organized parts, we must either be previously informed of the temperament and health of the individual, or we must draw our conclusions with the proviso, that they will hold good only on the supposition of his having enjoyed such a state of health and activity as were necessary for the due operation of the mental faculties; 2*dly*, We ought to state distinctly, that, by development alone, we can never predicate a man's actions; as these must necessarily vary according to circumstances. We can only speak as to his natural dispositions and talents.

Having premised this, Dr SPURZHEIM proceeded to point out the peculiarities of the development, although from lying on a flat dish, the brain had considerably changed its shape. He desired his auditors to remark the size of the cerebellum, and the great development of the posterior, and of part of the middle lobes of the brain, the convolutions of which were large and rounded, forming a contrast with the deficient size of the anterior lobes. The convolutions situated under the vertex, and towards the top of the head,

belonging to the organs of *self-esteem* and *firmness* were also very large, while those of *veneration* and *benevolence* were small. These peculiarities were so well marked, that Dr SPURZHEIM felt no difficulty in inferring from the large size of the cerebellum, that the individual would have " des " dispositions fortes à l'amour physique." From the large development of the convolutions belonging to the organs of the lower propensities, common to men and animals, and from the small endowment of intellect and moral sentiments or restraining powers, he inferred that " his natural " tendencies would not be towards virtue;" that he would be what is familiarly expressed in French by " un mauvais " sujet," being a very comprehensive term for every variety of bad dispositions, and that " he would be one to whom the " law would be necessary as a guide;" but not knowing the circumstances in which he had been placed, he could not say what his actions might have been.

At the conclusion of the lecture, a young man, an " élève " interne " of the Hôtel Dieu, came forward and said, that the brain was that of a *suicide*, who had died in that hospital, and that the dispositions inferred by Dr SPURZHEIM coincided perfectly with those manifested during life. As I happened at that time to follow the very interesting clinique of the justly celebrated DUPUYTREN, surgeon of that Hospital, whose patient he was, and as the case was interesting both in a surgical and phrenological point of view, my attention had been particularly directed to this very individual from the day of his entrance to that of his death. I was thus better able to appreciate the perfect accuracy of Dr SPURZHEIM's conclusions, than if I had merely trusted to the report of the *élève*. To enable others to judge how much they coincided with the truth, it may be worth while to enter into a short detail of the man's history.

The man had been a soldier; and, for some crime or

fault which he would never name, he was subjected to a "*peine infamante*," and banished from Paris to Orleans. He there tried to obtain employment in his own trade, that of a barber; but the news of his disgrace having reached the place, no one would receive him. He then suspected his wife, who remained in Paris, of having concerted his banishment with the Police, and of having entered into a plot to keep him at a distance. He thereupon resolved to return and to kill her, and then to slay himself. He set out accordingly; and, as he affirmed, walked the whole distance, without stopping more than a few minutes at a time. He saw his wife, and attacked her with a knife; but, from her greater strength, she succeeded in defending herself, and escaped. He then plunged the knife into his own side, and inflicted a deep wound between the seventh and eighth ribs; and, on that account, was brought to the Hôtel Dieu. During his illness, he shewed the most determined obstinacy, and indulged himself in abuse against every one, and particularly against his wife, and declared that he would still like to kill her.

In his clinical lectures, DUPUYTREN often mentioned and laid stress upon the "mauvais moral" of the man, which, he said, rendered the danger ten times greater. He added, that "Le malade s'impatientait contre tous les remèdes, était "tres impérieux, et donnait un negatif directe aux pré-"scriptions." The first three days he was obliged in consequence to put him in a strait waistcoat; and, at the end of that time, he begged to have one hand left at liberty, to take snuff, which was granted. He instantly tore away the dressings, and was again confined. He was brought to the hospital on 14th, and died on 29th November.

On the morning of the 1st December, the cavities of the thorax and abdomen were opened, but the head was left untouched. When, on the evening of that day, the brain

was given in to Dr SPURZHEIM, as I knew that one of the eleves from the Hôtel Dieu attended his course, my first impression was that this must be the brain of the suicide; but, upon looking at it for a moment, I observed to a friend beside me, that it could not be the same; for the head of the suicide seemed to be a small one, whereas this brain was a large one. But I soon perceived the cause of the apparent difference. During his illness, the patient lay always on his back, with the occiput sunk in the pillow, leaving the forehead alone visible; and, as he could not be disturbed during all that time, we saw nothing more than the front. But, on examining the brain before us, the anterior lobes, or those which lie under the frontal bone, and which we saw, were found to be in reality *very small;* while the posterior, which were covered with the pillow, were, as already mentioned, very large. It was the large development of the posterior portion which gave the appearance of size to the whole brain *.

If any one, with the view of ascertaining the appearances of the convolutions, will carefully examine a variety of brains, I believe he will not afterwards be disposed to assert, that there is really so little difference among them as he would be led to expect from Dr BARCLAY's statement. Before my attention was directed particularly to this subject, although I had then seen many brains, I would have been disposed implicitly to assent to his opinion. But, after carefully comparing a great number, with the view of satisfying my own mind, I perceived the characteristic differences pointed out by Dr SPURZHEIM, to which I had

* A notice of this case appeared in my Brother's "Essays on Phrenology;" but the letter from which it was taken, having been written for his private information, and not intended for publication, it was necessarily imperfect. The account here given is translated from notes taken at the time, of what I either saw or heard from the individuals themselves.

not previously attended. It is stated, for example, that the anterior lobe of the brain uniformly presents convolutions different in appearance, direction, and size, from those of the middle lobe; while the latter, towards the coronal surface, uniformly presents convolutions differing in appearance and direction from those of the posterior lobe; and, above all, that the cerebellum, or organ of *amativeness*, is not only widely different in structure, but is separated by a strong membrane from all other organs, and can never be mistaken for any of them. Dr BARCLAY sometimes accuses the phrenologists of using their *oculi interni*, instead of their external senses; but these differences in the appearance of the different parts of the brain, have been pointed out to so many individuals in the dissections given along with my Brother's Lectures on Phrenology, that their existence cannot easily be denied. Indeed the careful inspection of a few brains will soon satisfy any one, that such differences actually exist in the different parts of the brain, which, joined to the fact of the development of no one of these parts bearing any relation whatever to the development of the others, would lead us to infer that each had a distinct function, even although we had not the analogy of other parts of the nervous system to support us. Has it not, as already mentioned, been lately proved by Mr C. BELL and MAGENDIE, that nerves, which, from their similarity of appearance, had for ages been regarded as possessing similar functions, in point of fact, had functions totally distinct and different?

When Dr BARCLAY says, that "on seeing an eye, an "ear, a nostril, a hand, or a tongue, no anatomist requires "to be informed what these are, where they were situated, "or how they were connected, to be able to say in what func-"tions it had been employed," and that "their marked pecu-"liarities speak for themselves," he appears to overlook the fact, that it is only in consequence of prior observations that

the anatomist does not require to be so informed. The uses of these parts were not discovered by intuition, nor by a process of reasoning upon the mere presentment of the object; for no man who saw an eye, an ear, or a nostril, for the first time (supposing it were possible for a man to be so situated) could, merely by looking at it, infer its function. In proof of this, I am much mistaken if Dr BARCLAY himself, on merely seeing an isolated branch of any of the cervical nerves, for example, or of the fifth or ninth pair, for the first, or even for the tenth time, could inform us "where they had been situated," or "how connected," or "in what functions employed," or if he could point out any "marked peculiarities which would speak for themselves;" and yet these parts are admitted to perform different functions.

But Dr BARCLAY's argument fails in another respect, that there is one at least of the phrenological organs which it is impossible to mistake in any situation. I allude to the cerebellum, which is as easily recognised as an eye or an ear, by him who has seen it once. And, if the brain lay as much open to observation as the hand, the eye, or the ear, I have no doubt that the differences which characterize its different parts, and the function which each performs, would have been discovered long ago. But the cases are widely different: for, even the anatomist, who confines his attention to his own science, has but few opportunities of minutely inspecting the brain; and, having hitherto had no particular motive for doing so, these opportunities were not, in every instance, embraced. The phrenologist, then, in endeavouring to discover the functions of the different parts of the brain, by the observation of the relations existing between these parts and particular mental faculties, is only following the same course which proved to us that the eye was the organ of sight, the liver the secreter of the bile, or

the kidneys the secreters of the urine. And, by a close adherence to observation, he hopes at last to be able to pronounce as certainly upon the functions of the component parts of the brain, as he is now able to do upon those of the parts alluded to. Dr BARCLAY proceeds:

"Perhaps this circumstance may be adduced as one of the reasons why these organs have remained in concealment for so many ages; and yet this reason is scarcely admissible, considering especially, that these organs are never *found at the base of the cranium*, nor in any place *where they cannot at all times be easily seen*; nay, it appears that they so affect conspicuous situations, and so prone are they to obtrude themselves on the notice of the senses, that there is not any visible part on the crown of the head, on the frontal bone, on the occiput, or the temples, where, according to phrenologists, they do not exhibit, even through the hardest and the thickest skulls, undeniable proofs of their actual presence. Is it, then, in order to be always within the sphere of physiognomic and phrenological investigation, that they equally avoid the central parts of the cerebral substance? But, if always thus confined to the surface, and to the convolutions, for the sake of being seen, what becomes of the *corpus callosum*, the *septum lucidum*, the *fornix*, the *infundibulum*, the *two commissures*, the *corpora striata*, the *corpora quadrigemina*, the *pineal gland*, the *cornua ammonis*, and the *four ventricles?* Are these to be excluded from the number of organs, and not to be permitted to have any influence on the propensities?" &c.

The whole of this paragraph affords ample proof, if such were necessary, of what I advanced at the beginning of this paper, viz. that Dr BARCLAY uniformly writes under the impression, that the doctrines of Phrenology are the mere invention of Drs GALL and SPURZHEIM, and that they, and not Nature, have assigned particular functions to particular parts of the brain, and that it is therefore unnecessary to inquire whether the facts stated by them are true or false.

So far from refusing to examine any new truth which is alleged to have been discovered, on the ground that a *part cannot be true*, until the *whole* is made known, I would be inclined to put more faith in the veracity of the discoverer, for not having claimed too much. In like manner, I regard the fact of Drs GALL and SPURZHEIM not having assigned

functions to parts which are inaccessible to observation during life, in so far as it goes, as an irrefragable proof of their good faith and sincerity, since, by confining their attention to the observation of what is visible to all, they lay themselves completely open to refutation, if their observations are in the least erroneous; whereas, if the whole science were a mere invention of their fancies, no portion of the brain could be conceived more appropriate, or better fitted, for the purpose of being divided into imaginary organs, than those very parts alluded to by Dr BARCLAY, because, being hid from our view, neither he nor any other person could have had it in his power to verify or refute, from experience, the functions assigned them. If Dr BARCLAY had kept in mind, that Dr GALL discovered the functions of the brain, by comparing the development of its particular parts with the natural dispositions and talents of individuals, he would have seen the impossibility of assigning functions to parts, of the development of which he had no means of judging, during life; so much so, that had Dr GALL assigned particular functions to every part, whether hidden or exposed, then I conceive Dr BARCLAY would have been perfectly justified in concluding, that Phrenology was a mere fiction or theory of its founder, which he endeavoured to establish, by appealing to such experience as "bends and accommodates itself" to his views. So much, then, for the proneness of the organs "to obtrude themselves on the notice of the senses." As, from Dr BARCLAY's statement, however, one might be led to suppose, that the phrenologists *deny* the existence of any organs of mental faculties at the base of the brain, it may be proper to observe, that, in their writings, they expressly mention their belief of the connection of some mental powers with these parts, although, from their position in the living subject, no decisive observations have yet been made to determine their nature and number.

Nor is Dr Barclay altogether correct when he says, that there is no visible part on the crown of the head,—on the frontal bone,—on the occiput, or the temples, where these organs do not exhibit themselves; or when he says, that they are always confined to the surface, and avoid the central parts. For even in the latest phrenological plates and casts of the head, published in this country, a blank space is perceptible between the organs marked 16. and 33., the function of which has been but lately discovered; and the latest publications state, that the functions of No. 3. are still undetermined. It might be unnecessary to notice this fact, did not Dr Barclay's statement lead to the idea, that all the organs and faculties were marked out as they now stand from the very beginning, instead of being successively discovered, as mentioned in the preliminary dissertation. As to the organs being confined to the surface, Dr Spurzheim expressly and repeatedly mentions, and gives his reasons for believing, that they extend from the pyramidal bundles of the medulla oblongata, to the external surface of the convolutions; and he cautions his readers against falling into the common mistake, of supposing them confined to the surface. He, consequently, proposes estimating the length of the fibre, by that of a line drawn from the opening of the ear to the circumference in the direction of the organ, as the ear is found to be very nearly on a line with the upper part of the medulla oblongata. Dr Spurzheim, too, very justly remarks, that even if the organs *were* confined to the convolutions, and the energy of any mental faculty depended on their size; that *fact* would remain entirely unaffected by our ignorance of the functions of the central parts.

Farther, even supposing that we were entirely ignorant of the uses of the *corpus callosum*, &c. the inference which Dr Barclay wishes to be deduced, that we must there-

fore be ignorant of the functions of all the other parts of the brain, appears to be singularly illogical, as will be still more apparent, by the application of such a principle to the other organs of the body. Would Dr BARCLAY, for example, consent to be held ignorant of the uses of the lungs, because he, in common with other anatomists, remains ignorant of those of the mesenteric or thymus glands? Would he consent to be held ignorant of the use of the optic nerves, because he is ignorant of the functions of the ganglia of the sympathetic? Most assuredly not. Then, why refuse to receive or examine the discovery of the functions of certain parts of the brain, on the plea that we still remain ignorant of those of some other parts?

Even supposing the inference, that we must be ignorant in whole, because we are ignorant in part, to be strictly logical, I fear that we must weaken Dr BARCLAY's premises, by diminishing the number of the high sounding and formidable-looking, but really little things, upon which that extraordinary argument is founded. We begin by subtracting the *infundibulum*, and *four* ventricles, which, being mere *holes* or *cavities* in the brain, and not substances, cannot consistently be called organs of mental faculties, by any one who has even the most superficial acquaintance with the first principles of Phrenology. No one who had the slightest idea of the new system, could possibly express his surprise at *cavities* or *holes* not being received into the number of cerebral organs, destined for the operations of the mental faculties, "Nous ne cherchons pas les "fonctions particulieres du cerveau *dans le vide*, mais "dans les organes eux-memes," said GALL and SPURZHEIM on a similar occasion *. Of the four *corpora quadrigemina*, two are known and admitted to be the origin of

* Recherches sur le Systeme Nerveux, &c. p. 163.

the optic nerves; but the uses of the inferior two, each as large as a small bean, are still unknown. The *corpora striata* appear to constitute a part of the organs themselves, as the fibres forming the latter run through, and are increased by, and in proportion to, the great matter contained in these bodies. The phrenologists, however, having no means of making any physiological observations on the uses of the other parts, viz. the *corpus callosum*, &c. are obliged as yet to content themselves with what information can be derived from an anatomical investigation of their structure. An outline of this information may be given from an unbiassed authority, that of the French anatomist CLOQUET, whose work is in the hands of every student.

At p. 549. of his "Anatomie Descriptive," he says, "We "have just seen how the hemispheres of the brain are "formed by the diverging fibres; but *all the parts of each of* "*these hemispheres* are put in communication with the analo- "gous parts of the other hemisphere, by a new order of me- "dullary white and converging fibres, which arise from the "grey matter covering the external surface of the convolu- "tions, and constitute *different commissures*. It is these we "now proceed to study." He then describes as the first of these the *corpus callosum*, of which he tells us, p. 551, that the *cornu ammonis* is merely a reflected portion. CUVIER also speaks of one hemisphere "uniting with that of the oppo- "site side by one or more commissures or bundles of trans- "verse fibres, of which the most considerable takes the name "of *corpus callosum*." *Revue Encyclopedique*, Nov. 1822, p. 258. As to the *septum lucidum*, CLOQUET describes it as formed by the fibres of the *corpus callosum*, which turn downwards at the *raphé*, and "the *fornix* is formed by "the converging fibres of the posterior convolutions of the "middle lobe;" and in this account he is supported by most of the French anatomists of the present day, whose au-

thority, from the facilities which they enjoy of procuring fresh brains, and the use they have made of them, cannot easily be called in question.

The phrenologists, in common with other anatomists, give their reasons for believing these parts to belong to the system of commissures, without attempting to explain how they act; and not having sufficient data, they neither profess "to exclude" the former from the "number of organs," nor attempt to explain what "influence they may have on "the propensities or sentiments." It may, however, be worth while to state, that the *pineal gland*, *the inferior corpora quadrigemina*, and *septum lucidum*, with the *fornix* and *cornu ammonis* to boot, would with difficulty fill up little more than a *cubic inch* of space; so that if the public judge of their importance by the length of their names, the estimate will be a very erroneous one.

The next quotation which we shall give, affords another example of Dr BARCLAY's excessive liking for analogies, which, however, owing to a much greater facility which he possesses of perceiving resemblances than of distinguishing differences, are too often vague, inconclusive, and inapplicable. He says, "Another question also occurs, how does it happen, that these organs (*i. e.* cerebral organs), seem to be destitute of muscular action? One should imagine, that those faculties of which they are the residence would, beside deliberative organs, require corresponding executive organs, to bring their intentions, their resolutions, or their suggestions, when it is requisite, into visible operation. But where, it may be asked, are these corresponding executive organs? To this question no answer has been given; and should it be said that the muscles of the face, of the head, neck, trunk and extremities, may, by varying their infinite number of powers and of combinations, be sufficient for all executive purposes, will not such an answer lead to the conjecture, that a small number of parts in the brain may, by similar combinations, suffice for all the species of propensities, the species of sentiments, and the several faculties of knowledge and reflection? That State, he continues, certainly is not much to be envied, where there are more to advise than to listen, and more to command than are willing to obey. In all well regulated fleets and armies," &c.

In answer to the first question, I confess, I cannot see what need the brain has of *muscular action*, on the supposition of its being a congeries of several organs, any more than on that of its being in itself a single organ. If Dr BARCLAY could shew, that, as a single organ, it *has* muscular action, and that it loses it as a compound one, then his question would be quite to the point. The answer to the second question is, that, in truth, the muscles of the head, neck, trunk and extremities, act the part of the executive organs; because, without them, the mind is incapable of acting upon the external world. In this instance, therefore, and for the first time, Dr BARCLAY's analogy holds good, without his being aware that it does so. The "deliberative "bodies," which ought to be *few* in number, amount in the phrenological system to betwixt thirty and forty faculties; and the executive, which he infers ought to be much more numerous, are so in reality;—they include all the muscles of voluntary motion, amounting to upwards of 220 *pairs*, the bones, ligaments and cartilages, all of which are obviously essential to the performance of any act prompted by the will. Here, then, to use Dr BARCLAY's own words, there are evidently *few* to *advise* and *many* to *listen*, *few* to *command* and *many* to *obey*.

Having now examined in detail, the whole of Dr BARCLAY's objections, and shewn, that they are not supported by a single fact, observation, sound argument, or correct analogy, I may, with propriety, proceed to make a few general observations on the respective merits of the theory of unity, and of the phrenological view of a plurality of mental organs. Dr BARCLAY, indeed, does not very distinctly announce any theory of his own, concerning the organs of the mind; but as he evidently admits the existence of some organic medium, while he argues against the notion of the organs being several, it seems a fair inference to suppose,

that he espouses the idea of unity as the more philosophical of the two. The proper way to attain conviction of the truth of either, is carefully to examine Nature, and compare the result; but as Dr BARCLAY seems to have an aversion to this mode of enquiry, I shall at present follow more closely his own method, and proceed to consider what presumptive evidence may be drawn from sound analogies in favour of either side of the question. I do this chiefly in deference to Dr BARCLAY, who appears unwilling to repeat our observations for himself; and, therefore, has recourse to argument, founded on analogies, in order to disprove their accuracy. If Phrenology, however, has a real foundation in Nature, all sound arguments and correct analogies ought to coincide with and support it; and, therefore, we have no reason to fear the one mode of investigation more than the other. We prefer the method of observation simply because it leads to demonstration; whereas the other at best leads only to probability.

To ascertain, then, in the way alluded to, as far as possible, whether it is Dr BARCLAY himself or the phrenologists, who have really been guilty "of forsaking Nature," and "of taking their model from art," I propose to apply his view and that of the phrenologists to such phenomena of mind as are universally admitted, in order to discover which of the two best accords with and explains them. This line of argument is fair to both; for, as Nature must ever be consistent with herself, and as the two views are so opposite in themselves that the same facts cannot tally equally with both, we may fairly presume, that the one which appears best to harmonize with and explain these facts regarding the mind, will be the true one.

First, Then, it is an undisputed truth, that the various mental powers of man appear in succession, and as a ge-

neral rule, that the reflecting or reasoning faculties are those which arrive latest at perfection. In the child, the powers of observing the existence and qualities of external objects, arrive much sooner at their maturity than the reasoning faculties. Daily observation shews, that the brain undergoes a corresponding change; whereas we have no evidence that the immaterial principle varies in its powers from year to year. If the brain, as a whole, is the organ of the mind, this successive development of faculties is utterly at variance with what we should expect *a priori;* because, if the general organ is fitted for manifesting with success one mental faculty, it, one should think, ought to be equally so for the operation of all, which we see is not the case. The phrenologist, who observes different faculties to depend for the means of manifesting themselves on different parts of the brain, has no difficulty in reconciling and explaining the fact by his system; for one of these parts may be prematurely, and another lately, developed, accompanied with a corresponding development of faculty. Observation, indeed, shews, that different parts of the brain are really developed at different periods of life. In infancy, according to CHAUSSIER, the cerebellum forms one-fifteenth of the encephalic mass; and in adult age, from one-sixth to one-eighth, its size being thus in strict accordance with the energy of the propensity of which it is the organ. In childhood, the middle and lower part of the forehead generally predominates; in later life, the upper lateral parts become more prominent, which facts also are in strict accordance with the periods of unfolding of the knowing and reasoning powers.

2d, Genius is almost always partial, which it ought not to be, if the organ of the mind were single. A genius for poetry, for mechanics, for music, or for mathematics, sometimes appears at a very early age in individuals, who, in

regard to all other pursuits, are mere ordinary men, and who, with every effort, can never attain to any thing above mediocrity. If Dr BARCLAY believes that these results may depend on some difference of the immaterial principle, then he must suppose the latter to undergo a change, which is generally reckoned inconsistent with its nature.

3dly, The phenomena of dreaming are at variance with the supposition of the mind manifesting all its faculties by means of a single organ, while they are quite consistent with, and explicable by, that of a plurality of organs. In dreaming, the mind experiences numerous vivid emotions, such as those of fear, joy, affection, arising, succeeding one another, and departing without controul from the intellectual powers;—or, it is filled with a thousand varied conceptions, sometimes connected and rational, but more frequently disjointed and absurd,—and all differing widely from the waking operations of the mind, in wanting harmony, consistency, and sense. These phenomena harmonize remarkably with the notion of a variety of faculties and organs, some of which being active, would communicate these ideas and feelings which constitute a dream, while others remaining asleep, would, by their inactivity, permit that disordered action which characterise the pictures formed by the fancy during sleep.

In some individuals, of whom CONDILLAC was one, certain faculties act with greater energy during sleep than awake, because attention is not then distracted by the activity of the other powers. Were the organ of mind single, it is clear that all the faculties should be asleep or awake to the same extent at the same time; or, in other words, that no such thing as dreaming could take place. Somnambulism, although in itself a species of dreaming, affords a still stronger illustration. In that state one or more of the external, as well as internal, senses are awake, while

the others are dormant. In this instance we *see* that the organs asleep and awake are different, as when a person walks with his eyes shut; but let us suppose that they were as much hidden as the brain, would any man infer from the phenomena that sight, smell, taste, and voluntary motion, could be exercised by one and the same organ, when he finds all of them in different states and degrees of intensity in one individual at the same time? Never. Then, on what principle does any one draw a different inference from similar phenomena, when the internal faculties and organs are in question?

At present, however, it is chiefly to the admitted phenomena of what are called Partial Idiocy and Partial Insanity, that I am anxious to direct your attention; because these states of the mind are so plainly and strongly in contradiction with the notion of a single organ of mind, that PINEL himself, no friend to Phrenology, asks if their phenomena can be reconciled to such a conception.

Partial Idiocy is that state in which an individual manifests one or several powers of the mind with an ordinary degree of energy, while he is deprived to a greater or less extent of the power of manifesting all the others. PINEL, HASLAM, RUSH, ESQUIROL, and, in short, every writer on insanity, speaks of the partial development of certain mental powers in idiots; and RUSH in particular not only alludes to the powers of intellect, but also to the partial possession of the moral faculties. Some idiots, he observes, are as remarkable for correct moral feelings as some great geniuses are for the reverse. In his Traité du Goitre et de la Crétinisme, FODERE' thus speaks, p. 133., "It is re-"marked, that, by an *incxplicable singularity*, some of "these individuals (cretins) endowed with so weak minds, "are born with a particular talent for copying paintings, "for rhyming, or for music. I have known several who

" taught themselves to play passably on the organ and " harpsichord; others who understood, without ever having " had a master, the repairing of watches, and the construc- " tion of some pieces of mechanism." He adds, that these powers could not be attributed to the intellect, for " these " individuals not only could not read books which treated " of the principles of mechanics, but *ils etaient deroutés* " *lorsqu'on en parlait et ne se perfectionnaient jamais.*" It must be observed also, that these unfortunate individuals differ very much in the *kind* as well as quantity of mental power possessed. For example, an instance is given by PINEL, of an idiot girl who manifested a most wonderful propensity to imitate whatever she heard or saw, but who displayed no other intellectual faculty in a perceptible degree, and never attached an idea to the sound she uttered. Dr RUSH particularises one man who was remarkable for his religious feelings, although exceedingly deficient in intellectual power, and other moral sentiments; and among the cretins, many are to be found who scarcely manifest any other faculty of the mind except that of Amativeness. The above quotation from FODERE' also illustrates this fact. One is all kindness and good nature, another quarrelsome and mischievous. One has a lively perception of harmony in music, while another has none.

It ought also to be observed, that the characteristic features of each particular case are strictly permanent. The idiot, who to-day manifests the faculty of tune, the feeling of benevolence, of veneration, or of self-esteem, will not to-morrow, nor in a year, change the nature of his predominant manifestations. Were the deficiency of the single organ the cause of idiocy, these phenomena ought not to appear; for the general organ being able to manifest one faculty, ought, according to the circumstances in which the individual is placed, to be equally able to manifest all

others, whose activity may be required, and thus the character of the idiocy ought to change with every passing event, which it never does. FODERE' calls these "inexplicable singularities," and, no doubt, on his and Dr BARCLAY's theory they truly are so. To the phrenologist, however, they offer no difficulty, for they are in perfect harmony with *his* views. Satisfied from observation that each mental faculty manifests itself through the medium of a separate organ, it is as easy and natural for him to conceive that one of these organs may be defective from birth, accompanied with a corresponding deficiency in the power of manifesting the faculty with which it is connected, as to conceive that the organ of an external sense, that of hearing, for instance, may be imperfect from birth, while those of sight, taste, smell, and touch, may either be unimpaired, or may be impaired to a less degree. The difference in the *kind* of powers manifested in cases of partial idiocy, between the capacity for mechanics, for instance, and the sentiment of veneration, self-esteem, or benevolence, is as great as between the sensations excited by the perception of a sound, a taste, or a smell. To infer, therefore, that one organ serves for the manifestation of all these faculties, is really much the same in point of logic, as if we were to suppose all the external senses to communicate with the mind through the medium of only one nerve, in spite of the facts of many individuals being blind who are not deaf, or deaf and still able to see and smell.

Although partial idiots manifest one or more faculties more powerfully than others, yet they seldom or never manifest any with the energy of a sound mind. Consequently, according to the phrenological system, we ought, in such cases, generally, to find the brain defective in size. Now, PINEL, and many other opponents, inform us, that this is precisely the case; and in the course of my own ob-

servations, both on the Continent and in this country, I have found the same fact to hold good in a considerable number of cases. It does not always occur, because, although small size is a frequent cause of idiocy, it is by no means the only one. I may farther mention, that phrenologists, by *actual observation*, have found in idiots those parts of the brain most fully developed, which corresponded to the organs of the faculties most strongly manifested by them; and observation also, has, in some instances, shewn the entire absence of those convolutions which form a part of the organs of certain faculties, in which they were deficient. Indeed, by comparing the brains and mental manifestations of some idiots with those of healthy individuals, the conviction of a plurality of organs is almost forced upon the mind, by the evident and distinctive characteristics of each. In the collection of the Society, there is a cast of the brain of an idiot girl, in which no trace of certain convolutions, which, in the ordinary state, indicate the development of the organs of *causality*, can be perceived; while others are distinctly recognisable. I have also seen in the possession of Dr SPURZHEIM, a cast of a brain, in which the organs of *veneration* were wanting, and a deep hollow existed in the corresponding situation.

We come now to the consideration of Partial Insanity, or that state in which one or more faculties of the mind are diseased, without affecting the integrity of the remainder. This state, which is also known by the name of Monomania, appears, equally with the former, to exclude the possibility of one organ executing the functions of all the mental faculties; for the argument constantly recurs, that if the organ be sufficiently sound to manifest one faculty in its perfect state, it ought to be equally capable of manifesting all; which, however, is known to be in direct opposition to fact. Having, in a former paper "On Insanity, as illus-

trated by Phrenology," laid before the Society a great variety of cases connected with the point now under discussion, I shall, on the present occasion, confine myself to the statement of a very few instances, merely in illustration of the proposition.

Of *folie raisonnante* PINEL thus speaks:—"Hospitals for the insane are never without some example of mania marked by acts of extravagance, or even of fury, with a kind of judgment preserved in all its integrity, if we judge of it by the conversation; the lunatic gives the most just and precise answers to the questions of the curious; no incoherence of ideas is discernible; he reads and writes letters as if his understanding were perfectly sound; and yet, by a singular contrast, he tears in pieces his clothes, and bed-covers, and always finds some plausible reason to justify his wandering, and his fury. This sort of mania is *so far from rare*, that the vulgar name of *folie raisonnante* has been given to it." Page 93.—A very striking instance of furious mania, with integrity of intellect, will be found, quoted from PINEL, in the Preliminary Dissertation, and which it is unnecessary for me to repeat. I shall, however, add another equally interesting case, from the same author. "On ne peut concevoir la nature d'une certaine aliénation, qui est comme un mélange de raison et d'extravagance, de discernement, et d'un vrai délire, *objets qui semblent s'exclure reciproquement*." "One lunatic," he continues, "whose malady is of seven years' standing, is perfectly aware of his state, and forms as sound a judgment of it as if it were a thing which did not immediately concern himself. He tries to make efforts to free himself from it: but, on the other hand, he is convinced that it is incurable. If any one remarks the incoherence in his ideas in his talking, he readily acknowledges it; but answers, that this inclination overpowers him so much, that he cannot but submit. He adds, that he does not guarantee the soundness of the judgments which he forms, but that it is not in his power to rectify them. His understanding is much more altered in another respect, that he believes himself above all ordinary rules; and he thinks, that if he once resolved to approximate to other men in his conduct, he must begin by doing most extraordinary things, from which the greatest evils and even atrocities would result to himself. He believes, for example, that if he wiped his nose, that organ would remain in his handkerchief; that if he shaved himself, he must, of neces-

sity, cut his throat, and that at the first attempt to walk, his legs would break like glass. He sometimes subjects himself to rigorous abstinence, for several days, under the impression, that if he took aliments, they would suffocate him. What are we to think of an aberration of intellect so regular and so singular?"—Page 94.

I may, for the sake of illustration, mention an instance of religious melancholy, which I saw, when attending Esquirol's very interesting practice, at the Salpétrière of Paris. It was that of a woman, who believed herself possessed of the devil, and devoted to hell-fire. No arguments, however forcible, could afford her any consolation, by shewing the error under which she laboured. She sat absorbed in melancholy at the prospect of future misery. If her attention, however, was called to any other subject, she talked not only with perfect soundness, but *with more than ordinary acuteness;* whenever any allusion was made to that single point, she became incoherent and agitated. Esquirol mentioned in his lectures a remarkable instance of the integrity of intellect, in a similar case. After endeavouring, by argument, to convince the patient of her mistake, she answered calmly, "*Je vous entends très bien, je com-*" *prends vos raisonnemens; mais si j'étais convaincue, je*" *serais guerie.*"

Nothing is more common than to see patients diseased so far as to believe themselves kings, princes, generals, or even the Deity himself, and yet act and talk rationally and consistently, if their new dignity is not disputed. Some shew a talent for mechanics, for music, or for poetry, which they never possessed while in health; and yet, in other respects, are evidently insane. Rush, Perfect, Crichton, Pinel and Esquirol, all mention facts of this nature; and I have had an opportunity of seeing them myself. In some instances, from diseased activity of the intellectual faculties, the patient manifests an energy and scope of reasoning

powers, which he never before possessed. PINEL mentions cases of this kind, particularly that of a man, who longed, with impatience, for the accession of the paroxysm; for, during it, every thing appeared easy to him; and he discoursed on the political events of the day with great ease and profoundness. FODERE', in his Traité du Delire, has a passage which is worth quoting. "If," says he, "the "imagination, for the most part, offers only disjointed sen- "tences, and actions full of extravagance, one is astonish- "ed, at other times, with the elevation of ideas, with the "propriety of language, with the force of reasoning, with "the dignity of carriage, and with the expression of some "madmen during the fit, who, in the intervals, however, "are but ordinary men."

In some nervous diseases, the patient appears to manifest one or more faculties in perfection, while the others remain inactive. In the Journal General de Médecine, vol. xl. p. 155. the case of a young Englishman is related, who "had an attack every other day, during which, al- "though he absolutely saw and heard nothing, as was re- "peatedly verified by experiment, yet he occupied himself "particularly with mathematics, arithmetic, and loga- "rithms, which were his favourite studies. His operations "were rapid and just, although they required the most "minute attention, and a strict sequence in the combina- "tions. Every day new problems arose, which he resolved "for the first time." I had frequent occasion to see a lady who suddenly became insensible from a nervous attack. After several hours she began to shew signs of returning sensibility, and at last began to speak. The first use she made of her tongue, was to give a very correct imitation of the favourite tones and expressions of her most intimate friends, many of whom at that time stood around her, lamenting her early fate, for they believed she was dying.

She was still insensible to any thing that was said to her, but yet imitated so perfectly the voice and expressions of each friend in succession, as to force laughter in the midst of tears. To her friends it was matter of no small astonishment to hear her mimick, as, when in health, she was never known to exhibit that power in any perceptible degree. I was aware, from a previous examination of her development, that she possessed the organ much above an average degree, but other faculties prevented any open manifestation of the power in the form of mimicry. On recovery, she retained no recollection of the exhibition she had made, but appeared to think it possible enough.

It would be easy for me to multiply such instances as these, of the partial affection of the mental faculties; but it is needless to occupy your time with more, and the above are amply sufficient to shew the nature and bearing of such cases. Here, again, the difficulty recurs, of reconciling such facts with the idea of one organ executing all the functions of the mind. How comes that organ to be able to manifest one, but *not all* the faculties? or, How does it happen that these affections retain the same characteristic features throughout? That the patient who labours under religious melancholy, is found the same to-day as yesterday, and will be found the same to-morrow, for a month, or for a year; or how does it happen that a person may be insane, and yet aware of being so? If the single organ were affected, surely all the faculties of mind, of which it is said to be the instrument, ought *in every case* to be equally deranged, and the patient ought to pass in one moment from an abyss of despondency to the abodes of bliss, from the state of listless apathy to that of demoniacal furor. We may be told that this is sometimes found actually to be the case, and no doubt it is so; but it is far more rare than the other state, and is easily explained on the phrenological

principles; for, in such cases, the whole brain, including, of course, *all* the organs, is diseased. This state, therefore, affords a true picture of the nature of insanity, such as it would *necessarily* be in every instance, if the organ of mind were single. It must strike every one who has been at all in the habit of seeing cases of insanity, or of reading histories of them in books, that there is scarcely a single case to be met with, which is, I do not say explained by, but even consistent with, the division and functions of the faculties assigned by the metaphysicians. PINEL, CRICHTON, and many other very eminent and very philosophical men, have laboured to reconcile some species of insanity to the metaphysical systems, which they had severally adopted; but, with all their genius, and with all their unwearied industry, they have hitherto laboured in vain. Whereas, not a single instance will be found, which is in contradiction with the principle of a plurality of organs, nor even, as far as I am aware, with the existence of such organs as we consider already ascertained.

Besides the phenomena of idiocy and insanity, there is also another class of facts (to which, however, I shall only allude) equally at variance with the supposition of a single organ of mind, viz. partial injuries of the brain, which are said to have occurred without injury to the mental faculties. Having in a former communication to the Society examined these cases in detail, I need not repeat them, but merely observe, that if every part of the brain is concerned in every mental act, it appears strange that all the processes of thought should be manifested with *equal success*, when a great part of the brain is injured or destroyed, as when its whole structure is sound and entire. If the fact were really as here stated, the brain would form an exception to the general laws of organic structure; for although a part of the lungs may be sufficient to maintain respiration, or a

part of the stomach to execute digestion, in such a way as to support life, there is no instance in which these functions have been as successfully performed by impaired organs, as they would have been by lungs and stomach in their natural state of health and activity. The phrenologists are reduced to no such strait, to reconcile the occurrence of such cases with their system, for as soon as the principle of a plurality of organs is acknowledged, they admit of an easy and satisfactory explanation.

From the preceding considerations, then, it appears, that any theory, founded upon the notion of a single organ, is uniformly at variance with all that is ascertained to be fact in the philosophy of mind; and that, on the other hand, the phrenological principle of a plurality of organs, while it satisfactorily explains *most* of these facts, is consistent with *all* of them. Its truth is thus almost demonstrated, not by far-fetched, or pretended facts, which few can verify, but by facts which, to use Dr BARCLAY's own expression, daily "obtrude themselves upon the notice of the senses." This principle, indeed, bears on the face of it so much greater a degree of probability than the opposite one, as to have long since forced itself on the minds of many inquirers. FODERE' himself, a very zealous opponent of Phrenology, after recapitulating a great many reasons similar to those already mentioned, which had been employed by philosophers antecedent to GALL and SPURZHEIM, for believing in a plurality of mental organs, is constrained to admit, that "this kind "of reasoning has been employed '*par la plupart* des ana-"'tomistes,' from the time of GALEN down to those of our "own day, and even by the great HALLER, '*qui eprouvait* "'*le besoin* d'assigner une fonction à chaque department du "cerveau,'" &c. PINEL also, (in the article "Manie," in the Encyclopedie Methodique,) after relating some cases of partial insanity, asks, "si *tout cet ensemble de faits peut*

" *se concilier avec l'opinion d'un siège ou d'un principe* " *unique de l'entendement.*" If, then, the majority of anatomists, for the last 2000 years, and such illustrious physiologists as HALLER, and the others above referred to, were led to the belief of a plurality of mental organs, by a perception of the contradiction and inconsistency existing between the phenomena, and the supposition of the whole brain being the single organ of mind, I cannot be far wrong in saying, that the latter notion, although it may be adopted by Dr BARCLAY, so far from being self-evident, appears so improbable as to require even stronger facts to prove it than the phrenological view.

Truth alone can always be consistent. No wonder, then, that Dr BARCLAY, in his zeal to overturn our system, not unfrequently runs counter to his own tenets; for, after telling us that " the phrenologists, in forming their system, " seem to have forsaken nature entirely, and to have taken " their model from art, and from art too in its most rude " and incipient stages," he adds, that " to the observations " made by phrenologists on the forms of the head, as in- " dicative of the several powers and capacities of the ani- " mating principle, if made with sufficient caution and ac- " curacy, and if the relations which they wish to demon- " strate can be fairly established upon the broad principles " of induction, there can be *no rational objection.*" Would it not, then, I beg to ask, have been much more philosophical on the part of Dr BARCLAY, instead of endeavouring to upset the evidence of *facts* by *à priori* reasoning, and inconclusive analogies, to have tried, whether the " *observations* made by phrenologists on the forms of the " head as indicative of the several powers, and capaci- " ties of the animating principle, *were* fairly established " upon the broad principles of induction" or not? The phrenologists are well aware, from their own experience,

that no man can form an adequate idea, either of the solidity of foundation, or richness of superstructure of Phrenology, without having gone particularly and carefully over an extensive field of inquiry, and verified the results obtained by the founders of the science. They, therefore, cannot but regret that Dr BARCLAY, a gentleman remarkable for his learning and liberality, should have allowed himself to speak so decidedly on the merits of a subject with which he was obviously very imperfectly acquainted, and still more, that he should have done so, without having a single fact or solid argument to support his objections. They believe, that if he had kept in view the two leading principles; 1*st*, That dissection alone is insufficient to reveal the functions of an organ; and, 2*d*, That *consciousness* does not reveal even the existence of the brain, much less the functions of its parts; he would have *felt*, that if he did not chuse to refute by facts the doctrines of Phrenology, the only other way to produce conviction in the minds of such of his readers as were acquainted with that science, was to establish the ordinary theory of unity of organ, by a reference, at least, to such undisputed facts as were inconsistent with the opposite principle of a plurality of organs.

Notwithstanding his never having repeated "the obser-"vations made by phrenologists," with a view to ascertain their truth, Dr BARCLAY, in a passage immediately subsequent to the above, proceeds to assure us, that "their "supposed organs rest upon a quite different foundation;" and that "not being demonstrable in form or in structure, "they must ever remain the mere offspring of a hypo-"thesis; and of a hypothesis, which may be disproved by "a *reductio ad absurdum*." Keeping in view that the phrenologists employ the word "organ" to denote any corporeal part, (whatever its form and structure), *which serves as the instrument*, "or is *necessary for* the due manifes-

" tation of a mental faculty," it is difficult to perceive the consistency between this observation and the preceding. When the phrenologists assert, that a large projection caused by the brain, in the middle of the parietal bones, is indicative of a strong sentiment of caution, the Doctor sees " no rational objection " to the fact being so, and only requires evidence of its truth to believe it. When, however, in conformity with the above meaning, the phrenologists use the phrase " organ of *cautiousness*," to denote the *fact* of that connection between the feeling and the particular part of the brain, which observation has proved to exist, he objects to this, " as a hypothesis which may be disproved " by a *reductio ad absurdum !*" To me it appears a question of very secondary importance, whether the word " organ" is rightly used in this sense or not, since the phrenologists clearly define what they mean by it. If Dr BARCLAY, however, as there is much reason to suppose, applies that term only to parts connected or divided in a particular way from other parts, he is not on that account entitled to transfer his own meaning to the word as used by the phrenologists, and then accuse them of inventing what they had observed to exist in nature.

On perusing Dr BARCLAY'S observations, I at first thought they required no answer, but on reflection I was satisfied, that the authority of his name is justly so great as to induce many, especially of his numerous pupils, to rely implicitly on his judgment, without examining the subject for themselves; and it occurred that respect to him, as well as to the cause of truth, and the interests of our science, rendered it highly proper to prepare an answer to his objections. I was encouraged the more to undertake this duty, from the Doctor's professed respect for the phrenologists, while he opposes their views. He expresses his conviction, " that " they will not be offended at these remarks made upon

" their system, but will acquiesce in them where they are " just, and where they are otherwise, will be able to refute " them, or be able to shew that he has misapprehended their " meaning;" from which, and from his well known candour and liberality, I conclude, that he will be pleased rather than offended with an examination of his opinions. The high respect which I have long felt for him, increased by every succeeding attendance on his lectures, would have effectually deterred me from entering the lists with him in a controversy on a question of mere opinion. But as Phrenology is not a matter of opinion, but of fact, and one of high importance, and as Dr BARCLAY's object and ours must necessarily be the same, the discovery of truth,—I have ventured, with much deference to his superior abilities and knowledge, to submit to the consideration of the Society, such remarks as appeared to be necessary, for forming a proper estimate of the value of his objections. One acknowledgment the phrenologists owe to Dr BARCLAY, and I sincerely pay it. He has displayed a truly manly and independent spirit, in fairly committing to the press his objections, and publishing them with his name; instead of resorting to anonymous abuse, which he would be ashamed to acknowledge, as has been the practice of many of our opponents. His objections have been publicly offered to us for consideration, or refutation; and he fairly trusts to the merits of his arguments for their success, and invites his reader to decide according to the preponderance of reason and of fact. Such conduct towards Phrenology is as rare as it is honourable.

XIII.—*On the Phrenology of Hindostan.*

By Dr George Murray Paterson.

(Read 1st May 1823.)

THE human brain, considered as the instrument of mind, whether performing its functions within or without the Tropics, is assuredly one of the most astonishing miracles of creation, and one of the sublimest objects which Nature presents to the contemplative faculties of man. By the laws of induction, the comparison of cerebral development with mental manifestation clearly demonstrates, that diversities of faculty and feeling, among the same as well as among different races of the human species, must positively be referred to diversities of cerebral organization. The following memoir purposes to point out the differences between the cerebral developments indicated by the crania of that ancient and peculiar people the Hindoos, and those indicated by the crania of civilized Europe.

" The form of the cranium," says an eloquent zoologist *, " differs no less than the colour of the skin, and one particular contour will run by gentle and deceiving gradations into another; however, there is an undeniable constancy of character in the skulls of different nations." " The cranium varies," says that excellent practical anatomist Mr Fyfe, " according to the original form of the brain " upon which it is moulded †." The superficies of the cranium, therefore, is the page from which we are to read the varied development of the human brain; and it may be considered as the eloquent page of Nature, teaching us " as one having authority."

The Hindoo cranium varies from the figure of a plane oblate, indicating only negation and imbecillity, to that of an irregular elliptic sphere, expressive of mental activity. In making sections of the skulls of this nation, irregularities in point of density of the plates frequently occur; but, for the most part, both plates on each side the diploë are tolerably parallel in direction. The bones are more delicate and brittle, and the absence of suture more frequent, than in the European cranium. It is true, that adventitious irregularities are occasionally to be met with, both internally and externally, but are not easily confounded with true cerebral development, by fingers habituated to phrenological taxis. Such fortuitous excrescences or depositions, when they do occur, can no more hide the real development of the brain from the phrenologist, than those terrestrial inequalities, the Himalayan chain of mountains, conceal the rotundity of this planet from the recognition of the astronomer.

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* Mr Laurence, Lectures on Physiology, &c.

† System of Anatomy, vol. i.

The *norma verticalis* of M. Blumenbach, furnishes a most advantageous mode of viewing and contrasting crania, inasmuch as it commands almost all the aspects of the skull, and at one glance offers the most interesting points. To facilitate this examination, we shall consider the organs as they lie, under one or other of the bones composing the cranium.

Those which chiefly concern the phrenologist are the frontal, the parietal, the temporal and the occipital.

The portions of the frontal bone, which hang over the facial regions of the head, are, in the Hindoo, neither so high, nor so much expanded laterally, as the same portions in the European. All the organs, therefore, comprehended by these portions, are less powerfully developed, and appear much more crowded in the former than in the latter. The superior-lateral and anterior-vertical portions of the frontal bone, have not that bold curve and free expansion in the Hindoo, which they enjoy in the European fore-head; but as the bone mounts to vault the brow, there appears as if some few thin slices had been dexterously removed,—and yet this so very carefully, as if it had been done to save appearances.

The parietal bone, where it meets its fellow at the sagittal structure, and just as it begins to dip posteriorly, has its vault less capacious in the Hindoo than in the European skull: where it unites with the petrous portion of the temporal bone, and about the middle of the lambdoid suture, its convexity is less in the former than the latter; but in its anterior-lateral, medial, and posterior portions, the parietal bone in the Hindoo far exceeds the parietal of the European in point of convexity.

The occipital is similar in the Hindoo to the same bone in the European cranium in every respect, excepting that the plenitude of the organs is more constant and uniform

in the former than in the latter. The temporal bone has its squamous plate more delicate and less convex, and the temporal wing of the sphenoid bone is more concave in the Hindoo than in the European cranium.

I found that length and breadth measurements, taken from both my European and Hindoo skulls, accorded with the differences of the respective bones, which I have just described, and the *norma verticalis* of M. Blumenbach proved the truth of these differences very decisively. I placed upon a table, in a row, one Hindoo skull between two European skulls, and one European skull between two Hindoo skulls, alternately, with their zygomas perpendicular; and I contemplated them *a tergo*, for several weeks, for the space of an hour at a time. The inferences drawn from these repeated comparisons coincided with those already deduced from the special shape of the respective bones, and also with the length and breadth measurements.

It is not my intention here to enter into the inquiry, how far the Hindoo skull approximates in shape to, or differs from, the Caucasian, Mongolian and Ethiopic varieties of man,—distinctions which the industry and genius of M. Blumenbach have laid down; for I consider these distinctions by far too general to be of much service to phrenological science. To discriminate, among vast varieties of formation, the peculiarities which characterise the cranium of a distinct race, is a task of consummate labour and nicety, and perhaps it is better in the infancy of any science to shun as much as possible all attempts at artificial classification. Decision, and consequently generalization, ought to pause till crania from every race of every nation on the globe be diligently collated and attentively perused.

I proceed, therefore, to inquire, negatively and positively, how far the cerebral developments, indicated by the

bones of the Hindoo skull, accord with the mental manifestations of the Hindoos*; and, for this purpose, to avoid

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* The Committee take the liberty of mentioning, that Dr Paterson presented to the Society twelve Hindoo crania, in illustration of the present Essay. They all appear to have belonged to adults, and were selected by Ram Mohan Roy, a native of distinguished talents, and extensive information, as affording, as nearly as possible, an average specimen of the Hindoo skull. The history of the individuals, and the castes to which they belonged, are not known; so that they are illustrative only of the general qualities of that variety of the human species. On placing them in juxtaposition with the skulls of Europeans, their inferiority in size is very apparent; and as size in the brain is (cæteris paribus) a measure of natural mental energy, the national deficiency in the latter quality is equally conspicuous. The development of the particular organs, indicated by these skulls, coincides very closely with that specified in the text, as characterising the Hindoo in general. Plate III. Fig. 3. represents a medium of the twelve skulls; and its dimensions are as follows:

	Inches.
From centre of Philoprogenitiveness to Lower Individuality,	$6\frac{5}{8}$
Occipital spine to Lower Individuality,	$6\frac{2}{8}$
Do. to meatus auditorius externus,	$3\frac{1}{8}$
Meatus to Lower Individuality,	4
Ditto to Firmness,	$4\frac{7}{8}$
Destructiveness to Destructiveness,	$4\frac{1}{2}$
Secretiveness to Secretiveness,	5
Cautiousness to Cautiousness,	$5\frac{1}{8}$
Ideality to Ideality,	$4\frac{1}{8}$

The letter of Ram Mohan Roy to Dr Paterson, with the skulls, is in English, and to the following effect:

"To Dr George Murray Paterson.

"Dear Sir,—I regret that I should have forgotten the commission with which you honoured me, some time ago, and feel ashamed of myself for such an omission. I now have the pleasure of sending you the ten accompanying skulls; and if you find them calculated to answer your purpose, I will, with equal pleasure, send you as many as you may think sufficient for your pre-

resting in any case merely on probability and conjecture, I shall make use only of the twenty-four organs, which the experience of Phrenology has established.

Knowing Faculties.—When speaking of the frontal bone, I observed, that the development of its most anterior portions was less powerful in the Hindoo than in the European skull, and that the organs in the former appeared more crowded. I consider, therefore, that all the knowing faculties are less active, while I maintain, from an immense mass of observations, that the organs of *individuality*, *number*, and *language*, are comparatively the most fully developed in this genus of faculties. It is by *individuality* that a Hindoo is always so consciously alive to the objects around him; that is to say, to their mere existence, not to their relations. It is by this faculty that we chiefly lead him; and by means of this faculty, conjoined with his constitutional sensibility, we are enabled to excite his other faculties, and many of his propensities and sentiments. A Hindoo frequently takes notice of the existence of objects which escape the observation of his European master; but he never marks their relations. By his faculty of *number*, how active, and, at the same time, correct his calculation of simple numbers; but how rare his progress in algebraical or geometrical computation! What an active memory of arbitrary signs he enjoys! The prominence of the eye

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sent researches. If you wish me to procure you skulls of different descriptions, you will have the goodness to particularise them, that I may seek an opportunity of meeting your wishes.

"Owing to a variety of engagements, I have not hitherto been able to fulfil my intention to pay you a visit, an honour which, I hope, I shall be able to do myself, without much delay. In the mean time, I have the honour to remain, dear Sir, yours most obediently, (Signed) Ram Mohan Roy."

"10*th March* 1822."

is characteristic of the Hindoo; and his native language abounds in signs, which he very easily remembers; while we see that these signs are more communicative of propensities and sentiments than of ideas. In complex ideas, and philosophical expression, the Hindostanee language is exceedingly poor.

The organ of *form* is but very slightly developed; and although we teach them to form the letters of the English alphabet, and to write pretty well, their memory of forms is very bad. When they wish to point out resemblances in form, they must always lay hold of something, and keep it before their eyes, for the assistance of their memory of forms.

The organ of *locality* is also but slightly developed, and their memory of places is very treacherous. Europeans are well aware of their mental deficiency in this point, when they order their bearers (the servants who have the care of the wardrobe) to bring them certain parts of their dress. They wait, perhaps, an hour, before they get the article; during which time, the bearers have been digging into every drawer or trunk, having totally forgotten where they had laid it, perhaps not an hour after they had put it aside. They are not at all addicted to travelling.

The organ of *tune* is, in general, even less developed than those of *locality* and *form*; there are, however, frequent exceptions. They are fond of hearing fine music, nothing being so grateful to them as listening to the airs of a regimental band; but their own songs are destitute of melody, and are a mere monotony of recitation; the subject being generally love, or money, or a medley of both. Mr Southey remarks, and, I think, with great justice, "that "persons who are incapable of conceiving harmony, are "affected by music in the same way as brutes are."

Reflecting Faculties.—That portion of the frontal bone which indicates the size of the organ of *Comparison*, is

generally the most fully developed in this genus of faculties in the Hindoo. It is mentally manifested by them, in their strong propensity for similitudes, not in their powers of pointing out differences. The largeness of this organ, with a small development of *causality*, is the reason why the Hindostanee language abounds so much in metaphor, and is so sparing of philosophical expressions of discrimination.

The organ of *causality* is most slightly developed. We observed before, by his faculty of *individuality*, the Hindoo takes notice of the existence of phenomena, and this faculty empowers him, moreover, to note their association, yet he has a poor conception of causation. This defect appears to be one of the reasons why he manifests the feelings of surprise and astonishment upon so many occasions. It is a vulgar saying, "Surprise is ignorance;" but Phrenology proves its truth.

That portion of the bone which indicates the organ of *wit*, slopes off; a Hindoo frequently laughs, not from any thing wittily said by himself or others, but from something said or done which agreeably affects some of his predominant propensities or sentiments. He seldom laughs involuntarily. Now, involuntary laughter is that species of laughter which the sallies of wit irresistibly generate.

The organ of *imitation* is moderately developed. I have not met with many natives who excelled in mimickry; but several of my brother officers in India have assured me, that, in the upper provinces, they have seen many Hindoos surpass any actor they had ever witnessed on the London boards, both by gesture and intonation, in point of mimickry.

SENTIMENTS.—*Benevolence.*—Where the frontal bone mounts to vault the forehead, I have said that it is manifestly deficient in the Hindoo. There is a wide difference between a passive, peaceable forbearance, and an active percussive zeal

for the interests of others. Now, I maintain, that the Hindoo possesses the former, while he is wholly destitute of the latter. We must be always on our guard to discriminate between the mere constitutional sensibility of the Hindoo and genuine charity. Mr SOUTHEY judiciously remarks, "that there is a vast gap betwixt mere sensibility and true "benevolence;" and he also gives us a touchstone, by which we may distinguish them; for he adds, "the latter "always involves the idea and practice of self-denial." A Hindoo cannot comprehend the meaning of the words, "disinterested action;" and if, at any time, by beating it into his head, he arrives at the cold, theoretical conception of the phrase, he would smile, and consider the person who practised such actions as a *bura pag*, *hul*, a great ninny. A Hindoo rarely denies himself any thing for the comfort of another, unless he sees it will ultimately affect agreeably his propensities of *amativeness*, *philoprogenitiveness*, *secretiveness*, and *covetiveness*. His passive mildness, then, is the effect of the attenuated activity of the organ under consideration, combined with his love of domestic tranquillity, and his deficiency of the organs of *combativeness* and *destructiveness*, as will afterwards be more fully detailed.

Veneration.—I was first led to pay attention to the Phrenology of India, by one day accidentally observing in one of my bearers, a Hindoo of genuine descent, a very large prominence on the coronal superior surface of his head, the locality of this organ. His name was ADAM, a native of the province of Bahar. This man was more devoted to open acts of worship than any disciple of Vishnu I had ever seen. In his long recitations of adoration, he stood quite erect, muttered his words very fast, and his eyes were in perpetual motion; now shutting them and squeezing them hard together, now casting them upon the ground, now upon

the sky. This man was my under-bearer for the space of four months; and I seldom went out of my budgeerow (a boat), when on duty on the Ganges, or out of my bungalo (cottage), when in cantonments, without seeing or hearing ADAM at his devotions. However, the full development of this organ is by no means a national peculiarity. The Brahmins, who are the clerical part of the Hindoo community, have this organ more fully developed than the inferior castes; but, indeed, the head of a Brahmin is altogether superior in organization to the other castes. The more constant degree of development of this sentiment, drawn from the sum of my inductions, is *very moderate*, throughout all the provinces of Hindostan.

Hindoos believe in transmigration; their mythology has some resemblance to that of the Egyptians. They believe water to be the element of which the world was formed, *though not exactly according to the Wernerians;* they inflict severe punishments upon themselves to appease their gods; and they pay a peculiar veneration to the cow, and have abundance of idols.

Ideality.—This organ is rather more than moderately developed in the Hindoo. How is it mentally manifested? I have observed in the course of my extensive manipulations in the bazars, that there is a relation between the degree of development of this organ and the mental manifestation of credulity*. Their poetical effusions are highly inflated, florid and allegorical; but devoid of any sentiment to affect the heart. They are not sufficiently moral for the pro-

When Dr PATERSON left Europe, the faculty of "Wonder" was not ascertained; and, as the organ lies next to, and immediately above, that of *Ideality*, it might not be distinguished, in his observations, from the latter. "Wonder" and *Hope* are now discovered to give a natural tendency to credulity.

duction of good poetry. I am exactly of STRABO's opinion, that a good poet must first be a good man. "Ουκ οιον αγα-
"θον γενεσθαι ποιητην, μη προτερον γενηθεντα ανδρα αγαθον."

Firmness.—I have frequently found this organ little developed, frequently fully developed. I am at a loss, therefore, to fix its constancy of size in the Hindoo. I must, therefore, wait the result of farther experience. The Hindoo character on this point, as far as my knowledge extends at present, is that of fickleness.

The organs of *self-esteem* and *love of approbation* are generally very fully developed in this nation. External circumstances are totally inadequate to explain why this people have such a high opinion of themselves. They have no secular or titular rank among them *. The pride of caste, however, is a sentiment quite catholic throughout every district of Hindostan. "There is scarcely a crea-
"ture," Mr HAMILTON remarks, "so wretched or so igno-
"rant, but who, on this account, holds in the utmost con-
"tempt many persons in easy circumstances, and respect-
"able situations." All the motions of their body are in the direction of this organ; and their deportment clearly implies self-importance. They are greedy of adulation, and have a passionate desire for gaudy trinkets to adorn their bodies. Their *love of approbation*, however, generally aspires only to things of frivolous moment; and, as Lady IRWIN says, truly, "their heads are toy-shops, filled with
"trifling wares."

Cautiousness.—The portion of the parietal bone situated over the region of this organ, is uniformly very protuberant; and indeed, if the head be uncovered, this peculiar angularity of shape may be perceived at a great distance. I conceive

* *Veneration*, which Dr PATERSON calls moderate in the Hindoo, seems to be essential to the establishment of titles, at least of hereditary titles.

it is to this superior development that the national timidity of this people must be attributed.

PROPENSITIES.—*Amativeness.*—The Hindoo cerebellum is uniformly well developed. How is it manifested in the life and character of the people? The well known jealousy of this nation originates merely in a disagreeable affection of their *amativeness;* the great activity of which, conjoined with large *self-esteem*, *love of approbation*, and *acquisitiveness*, all of them highly selfish propensities, is well known to give the tendency to jealousy in love. Polygamy and unnatural desires abound. The swarms of children in the villages and towns, strike every stranger with astonishment. I could here enumerate many hundred anecdotes on the horrid abuses of this propensity; but we shall cease to be alarmed or surprised at the voluminous catalogue, when we recollect, that the poor Hindoo is not blessed with Christian Revelation, and that, from what we have already said on the development of the frontal bone, he has not much reflecting power to control the innate fury of this sometimes irresistible propensity.

Philoprogenitiveness. — This organ is uniformly very fully developed in the Hindoo. According to my observations, males and females possess it in the same proportion. It is manifested by the Hindoos in their predilection for domestic quiet; the happiness they seem to feel when surrounded by their children; in their terms of endearment; in the spirit of their lullabies; and in their frequent and ardent embraces. A group of native children, quite naked, running and jumping about, full of play, sensibility, and innocence, is a most interesting sight. Childhood is with them undoubtedly the heyday of their contracted span. On seeing such a group, I have often exclaimed with ROGERS:—

" Ah ! who, when fading of itself away,
" Would cloud the sunshine of their little day.
" Now is the May of life, careering round,
" Joy wings their feet, joy lifts them from the ground."

Constructiveness.—At the assigned localities of this organ, the bones are convex in the slightest degree. This is the most constant degree of development which the organ possesses. I have manipulated many Hindoo heads, where this organ was more than moderately developed. Indeed, during my earlier phrenological studies in India, I was induced to look upon this organ as generally well developed. In the course of my researches, however, I found my error; and, at the same time, a beautiful confirmation of the functions of the organ being perfectly ascertained. I began my phrenological manipulations in India, at a small town on the banks of the Ganges, called Fort Monghyr; and, from the heads of the inhabitants of that populous town and neighbourhood, I took my first phrenological notes. My observations in this town, tended to prove that the organ of *constructiveness* was more than moderately developed; and, in my first report to the Asiatic Society at Calcutta, I mentioned its degree of development accordingly. It is a very singular fact, that this town of Monghyr has been long noted for its superiority in cutlery, gun-making, tools, and a great variety of utensils and articles that are the result of mechanical construction. I was not aware of this being the case, till a long time after I had left Monghyr. I mention this circumstance, because it is useful to the interests of the science. When this organ acts in binary concert with the sentiment of *veneration* or superstition, then temples and idols, though very simple in themselves, are their most complicated performances.

Combativeness and *Destructiveness.*—The bone at the locality assigned to the organ of *combativeness* is nearly flat; while at that assigned to the organ of *destructive-*

ness the bone is either quite flat, or indicates a slight degree of concavity. In consequence of the high situation of the ears of this nation, some art is required in order to obtain an accurate idea of the development of the last mentioned organ, in the living subject. A Hindoo is averse to fighting excepting it be with his tongue. He is seldom attacked, and therefore he seldom exercises the little *combativeness* he possesses. Pugilism is rare in Hindostan. The organ of *language* appears to excite this weak organ the most powerfully. A Hindoo is not naturally inclined to destroy animal life; he is scarcely a carnivorous animal; and he has a tender and delicate care over the life and feeling of the most insignificant insect, or animalcule.

Acquisitiveness and *Secretiveness*.—The parietal bone is most fully developed in the regions which are the localities of the organs now under consideration. How, then, is this greater cerebral development manifested by the mind of the Hindoo? I might answer this question in a very few words, by replying, that Hindoo was only another term for falsehood, and that love of money is his darling propensity. But I will particularise.—A Hindoo will gratify his love of secrecy and his desire of gain at the same time. How does he pilfer from his European master? If a servant wishes to aggrandise himself at the expense of his master's sugar-candy, his tea, or his money, he will not steal and secrete a pound of sugar, or a pound of tea, or twenty rupees. No! he will filch a small bit of sugar-candy at tea, a second at tiffin (Indian lunch), and a third at dinner; these he will secrete till they accumulate, and then he will sell them. In the same way he will treat the tea, and the pice (copper coins), and any other article that will admit of a similar insensible mode of abstraction. A Hindoo is even proud of his accomplishment in the art of deceiving. Sir William Jones has been heard to say that in the bazars of Calcutta

he could purchase affidavits cheaper than asparagus. Like Iago, who ever made his fool his purse, a Hindoo is now assigning one motive, now a second, now a third, for his conduct, all the mere fictions of his hypocrisy. All this deceit and covetiveness is thickly covered over with a smooth flattering tongue, and the utmost suavity of address. In walking through the bazars, and observing this traffic of dissimulation, I used to repeat the following lines of Milton in the second book of the Paradise Lost:

> " But all is false and hollow; tho' their tongue
> " Drop manna; and can make the worse appear
> " The better reason, to perplex and dash
> " Maturest councils; yet their thoughts are low,
> " To vice industrious; but to nobler deeds
> " Tim'rous and slothful."

Guided by a sense of anatomical and phrenological truth, and by a love of freedom from the servitude of the schools, I have thus endeavoured, as briefly and clearly as possible, negatively and positively, to point out the concordance of the mental manifestations of the Hindoos with their cerebral developments, and I have assigned to each organ its appropriate sphere of action. But as Paul in his beautiful Epistle to the Corinthians writes, " As the eye cannot say " to the hand I have no need of thee, nor the head to the " feet I have no need of thee," so no organ of the brain can say to another I have no need of thee. In other words, we must not only allot to each organ its appropriate but also its relative share of action. But, it is evident there can be no fixed rules laid down for ascertaining the mutual action of the feelings and faculties, on account of the endless variations of circumstance. The just discrimination of reciprocal influences and modes of reaction must be left to the sound judgment of the observer.

Lastly, There is no field so ample for an inquiry into Oriental Phrenology as the Bazars of Calcutta, where na-

tives from all the provinces of Hindostan, and from all quarters of Asia, are to be found. I have manipulated Hindoos of every province from Cashmere to Cape Comorin, and from the banks of the Indus to the forests of Aracan; and the sum of my inductions from the immense mass of observations I have made tends to prove, that the brain is superiorly organised in those provinces of Hindostan that have been longest subjected to the invasions of Mahomedans.

Hindostan Proper has been longest subjected to the Mussulmans, and the brain in the provinces of this division enjoys a superior organization to the provinces of the other divisions. In the provinces of the Deccan of India, the brain is less perfect in organization, still less perfect in the provinces of the Mysore, while the cerebral organization of the natives of northern Hindostan is the least perfect of all. If then, superior cerebral organization, and consequently civilization, has been acquired in a great part of Hindostan by the presence of the disciples of Mahomet, with all their overbearing insolence, superstition and sensuality, what may we not expect in the lapse of centuries from the impartial administration of justice, and the annihilation of tyranny? The processes of Nature are slow, but sure. Generations are necessary for such great innate changes as those of cerebral organization, and our period of existence on earth being so limited is unable to trace them; and the real causes of such alterations are too apt to be overlooked, nay are frequently altogether denied. From the administration of British justice, and I fervently hope from the light of the Gospel, Hindoos in British India will change in cerebral organization, and consequently in mental manifestation, and will be very different from Hindoos subjected to the caprices of a native power. In a province contiguous to Bengal, the province of Orissa there is now a living ex-

ample of the truth I have been urging. In one part of this province, where there never have been many Mussulmans, and where there are no British, the organization of the brain is very imperfect, and here we find Hindoo manners in primitive purity; whereas in that part of the province possessed by the British, and inhabited by many Mussulmans, the organization of the brain is very superior, and the manners so much improved and civilized, that the Hindoos in this part seem a distinct variety. If the prejudices and superstitions of the Hindoos were rooted out, their temperate life is well adapted for the reception and practice of the Christian Religion, as affording that healthy and peaceable organic idiosyncrasy, which has the best influence over all the faculties, sentiments, and propensities of Man.

Insane Hospital.

An Indian madhouse is rather a picture of passive imbecillity, than a heart-rending scene of raving mania, or of moping melancholy. During my residence in Calcutta, there were very few acute cases of derangement in the Asylum. Many of the patients had been sent from the streets and roads, labouring under temporary fits of insanity, from drinking toddy and smoking bang. These were discharged whenever their temporary alienation subsided. The house is built in the form of an oblong, and besides commodious cells, has three large courts, kitchen-garden, and spacious lawn, for exercising the patients in the cool of the morning and evening. My excellent friend Mr Pemble Strong, the Surgeon of the Twenty-four Pergunnahs, was doing duty at the Institution, and he was extremely zealous for the comfort of his patients, and very attentive to their distribution, according to the different degrees, shades, and

peculiarities of their malady. This gentleman, under whose hospitable roof I lived during the major part of my stay in the Indian metropolis, afforded me every assistance in his power in forwarding my phrenological studies. On my recommendation, Mr Strong adopted a plan of noting down in the diary of the institution any peculiarities of development, whether positive or negative, in the different aspects of the skull, which he might observe when he examined a patient for admission. This is a plan which I would seriously recommend to be adopted, by all those who have the management of Lunatic Asylums in the British Empire. It is a knowledge easily obtained ; at all events it can do no harm ; as for my own part, I am confident such knowledge will often lead to a successful method of treatment; for I am decidedly of this opinion, that, as indigestion and dyspepsia to the stomach, cough or asthma to the lungs, so, mania and melancholia, to the brain. From experience I speak, and I firmly believe not in the efficiency of medical and dietetical aid alone, nor in the efficiency of moral management alone (which consists in addressing their faculties, sentiments, and propensities, so as to change their combinations, and their reciprocal influences and modes of reaction), but in the combined powers of medical, dietetical, and phrenological influences ; which influences I maintain, if judiciously directed, are certain antidotes to many cases of derangement now in the cells of many of the asylums of this Empire. But ere long I ardently hope, that all those who are placed in the management of these useful institutions, will see the necessity of never separating medical and dietetical from phrenological influences.

It is foreign to the limits of this memoir to particularize all the different peculiarities in the shape and contour of the skull, which presented themselves in the Insane Hospital of Calcutta. Suffice it to say, that it was impossible to

walk through the apartments of the house, without being struck by the truncated foreheads of the idiots,—by a large protuberance above the ear in a Mussulman, who had murdered all his family in a fit of phrenzy,—and by a concavity in that part of the parietal bone assigned for the organ of *self-esteem*, in a Malay girl, who was the very emblem of bashfulness and slovenliness, and who had no more regard for her person and habits than a brute.*

* The Committee think it proper to mention, that Dr PATERSON derived his knowledge of Phrenology from Dr SPURZHEIM's octavo work, "The Physiognomical System," without the benefit of any additional instruction. The preceding memoir not only harmonizes in principle with the general doctrines of the science, but contains several new and important suggestions, founded upon observations made by the Author in Hindostan, which coincide with conclusions drawn by other phrenologists, from similar phenomena observed in Europe. This, probably, is the first instance, in the history of the Philosophy of Mind, in which such an accordance has occurred; and, while it affords presumptive evidence of the truth of Phrenology, it adds an example of the vast superiority, in respect of consistency and practical application, of philosophy founded upon observation over hypotheses, however ingenious, derived from imagination.

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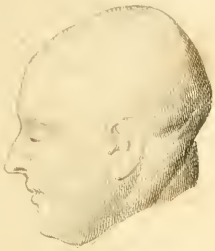

Mary McInnes

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Revd. Mr. M.

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D. Haggart

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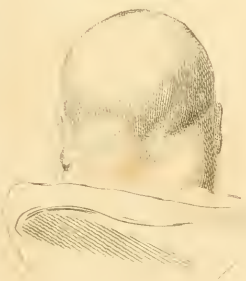

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D. Haggart

awn by W. D. Edinr. Engd by C. Thomson Edinr.

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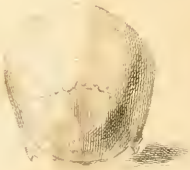

Hindoo

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Drawn by Jas S.S.

Engd by Thomson Cross Edin

LUKE O'NEIL & SON,

Statuaries and Artists

(BY APPOINTMENT)

to the Phrenological Society,

No. 125. CANONGATE,

EDINBURGH,

RESPECTFULLY intimate to the Public, That they supply Casts of the Human Head, indicating the situations of the different Organs; and that they have prepared Casts from some of the Skulls delineated in the Work of Sir G. S. MACKENZIE, Bart., who has put a large collection of Casts into the possession of L. O'N. & Son, for the purpose of enabling them to supply collections as they may be ordered. The following is a Catalogue of the Collection, which may be seen at 125. Canongate, and at Mr Galletti's, 10. Nelson Street, Glasgow.

CASTS OF HEADS FROM NATURE.

1. Dr Gall, founder of the Phrenological System.
2. Burke, procured by Mr Donkin of London.
3. A French M. D.
4. Pitt, from a Bust by Flaxman, procured by O'N. and Son.
5. Mr Hume, F. R. S. and M. P.
6. James Cardinal; an Illustration of Hydrocephalus.
7. A Lady; Organs of Conscientiousness large, Firmness small.
8. Deans, executed at London, for Child Murder; this individual was insane.
9. —— executed at York, for Robbery and Murder.
10. Mitchell, executed for Murdering his Sweetheart.
11. Haggart, executed for Murdering Mr Morrin, Dumfries Turnkey.
12. Dempsey, executed for shooting a Policeman at Greenock.
13. Maxwell, executed for Stouthrief, at Edinburgh.
14. Rev. Mr M., late Baptist Preacher, London.
15. An amiable character, native of West of Scotland.
16. A contrast to the above, who, after several irregularities, drowned himself.
17. An Idiot, from Dr S.
18. A ditto.
19. Miss Clara Fisher, a celebrated Juvenile Actress.
20. Napoleon, Organs marked.
21. Head, Organs marked by Dr S.
22. Thomson the Poet.

23. New Phrenological Busts, Organs marked. See Note below *.
24. Mary Macinnes, executed at Edinburgh for Murder.
25. Dr D., executed at London, for Forgery.
26. Head of a virtuous character.
27. Head of a Brazil Indian Chief.
28. Head of Francois, Cordonnier, Author of the Tragedy of Zenobia, &c. Ideality large.
29. Dr Spurzheim.

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* *Extracts from the Minutes of an Ordinary Meeting of the Phrenological Society, 3d January* 1821.

"A new Phrenological Bust was presented by Messrs LUKE O'NEIL & SON to the Society, for their inspection, previously to offering it for sale to the Public. The Society having examined the Bust, and found the Organs to be correctly delineated, expressed their approbation of the manner in which it is executed, and instructed the Secretary to return thanks to Messrs O'NEIL & SON for their present.

(Signed) "PETER COUPER,
"*Secretary Phrenological Society.*"

CASTS OF MASKS FROM THE FACE.

1. The Companion of Dr Gall, whose Configuration led to the discovery of the Phrenological System—Dr S.
2. A specimen of Language—Dr S.
3. Mental Calculating Boy of Bath—Dr S.
4. Mental Calculating Boy of Vienna.
5. Mental Calculating Boy, Master Zeroh Colbourn } O.N.
6. Mental Calculating Boy, Master George Bidder }
7. Sir Isaac Newton, Astronomer.
8. Sir William Herschell, Astronomer.
9. Sir James Edward Smith, President of the Linnean Society, London.

10. Edwards, an Engraver.
11. Toussaint, who pretended to be the Son of the St Domingo Chief; Secretiveness large.
12. A Frenchman; Individuality large.
13. An Artist.
14. Haydn, Musical Composer, taken from a Bust at Vienna.
15. Humboldt, Brother of the traveller; Number and Language large.
16. Mr Roscoe, late of Liverpool.
17. Oliver Cromwell.
18. Brunel, the celebrated Machinest.
19. Fraser, a Scotchman, resident in London; Individuality large.
20. M. De Voltaire; Language and Wit remarkable.
21. John Wilkes, late of London.
22. Alderman Wood, of London.
23. His late Majesty George the Third.
24. His present Majesty, when 30 years of age.
25. His Royal Highness the Duke of Sussex.
26. Haydon, Historical Painter.
27. David Wilkie, Artist.
28. Wordsworth, Poet of Cumberland.
29. John Hunter, Anatomist, late of London.
30. Benjamin Franklin, from a Bust by Oudon of Paris.
31. John Nelson, Itinerant Pandean Musician—O. N.
32. Professor Young, late Greek Professor of Glasgow College.
33. Henry Quatre, taken 10 years after death.
34. Illustration of Colour large.
35. Illustration of Colour deficient—Mr M.
36. A Musical Amateur—O. N.
37. J. P. Curran, M. P.—Dr Abell.
38. Mr Newenham, Artist—ditto.

39. Burke.
40. William Shakespeare.
41. Laurence Sterne.
42. Illustration; Size deficient.
43. Illustration; Locality remarkable.
44. Mr Pitt, taken after death.
45. Dr Samuel Johnson.
46. Sir Joshua Reynolds.
47. Dr Buchan, M. D.
48. Scott, shot in a duel.
49. John Horne Tooke.
50. Mrs Siddons *senior*.
51. Mary, Queen of Scots.
52. Charles Edward Stuart.
53. Alexander Pope.
54. M. Haye of Paris.—Hope large.

CASTS OF SKULLS.

1. Skull of King Robert Bruce, as discovered at Dunfermline Abbey.
2. Skull, having Veneration well marked, from Dr Spurzheim.
3. Skull of a Milliner of Vienna; Constructiveness large —Dr S.
4. Skull of La Fontaine, French author—Dr S.
5. Skull of Raphael de-Urbino, Italian Painter.
6. Skull of Dr Hette, remarkable for Benevolence, Conscientiousness, and Love of Approbation, large; Amativeness, small.
7. Skull of a Mummy
8. Skull of a Mummy } all from Dr Spurzeheim.
9. Skull of a Mummy
10. Skull of an American Indian.

11. Skull of an American Indian.
12. Skull of a Brazil Indian.
13. Skull of Hippolite, a Charib Chief.
14. Skull of a ditto.
15. Skull of a ditto.
16. Skull of a ditto.
17. Skull of a ditto.
18. Skull of a New-Hollander.
19. Skull of a ditto ditto.
20. Skull of Carnimbeigle, a New-Holland Chief, described by Sir George Mackenzie, Bart.
21. Skull of an Esquimaux.
22. Skull of a Negro.
23. Skull of a ditto.
24. Skull of a Turk.
25. Skull of a Gentoo,—Hindoo Tribe.
26. A Long Skull; Celtic Tribe.
27. Skull of an old Woman; Shape remarkable.
28. Skull of a German; remarkable Shape.
29. Skull of a cunning Debtor,—See Dr S.'s works.
30. Skull of Gordon, Murderer of the Pedlar Boy at Eskdalemuir.
31. Skull of Haggart, Murderer of the Dumfries Turnkey, Mr Morrin.
32. Skull of Hussey, a Murderer.
33. Skull of Nesbit, a ditto.
34. Skull of Bellingham, who shot Mr Percival.
35. Skull of Lockey, a Murderer.
36. Skull, executed at Nottingham for murdering a Child.
37. Skull of Buchanan, executed at Glasgow for Murder.
38. Skull of Clydesdale, ditto ditto ditto.
39. Skull of Rotherham, Murderer, shewing Interior and Exterior of the Skull.
40. Skull of a Buffoon to Emperor of Austria; Wit large; a person of superior talents.

41. Skull of a Caffre.
42. Cast of outside of a Skull } shewing the correspondence.
43. Cast of inside of a ditto }
44. Skull of Christian Sinclair, executed at Edinburgh for Child Murder,—from Mr Blyth, Surgeon.
45. Skull of an Idiot of Suabia, see head of ditto, No. 18.
46. Skull, Organs marked by Sir George Mackenzie, Bart.
47. Skull, a contrast to No. 46., having Organs large, where No. 46. is deficient.
48. Skull of an Idiot of Vienna.
49. Cast of the Brain, shewing the Convolutions.
50. Madeline Albert, of Moulins, in France.—Murdered her Mother and several other Members of theFamily.
51. Brain of an Idiot Girl.

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